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THE

ORCHID ALBUM,

COMPRISING

COLOURED FIGURES AND DESCRIPTIONS

OF

NEW, RARE, AND BEAUTIFUL

ORCHIDACEOUS PLANTS.

Plate 498
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CONDUCTED BY

ROBERT WARNER, F.L.S., F.R.H.S.

AUTHOR OF SELECT ORCHIDACEOUS PLANTS,

AND

HENRY WILLIAMS, F.L.S., F.R.H.S.

THE COLOURED FIGURES BY JOHN NUGENT FITCH, F.L.S.

VOLUME XI.

LONDON:

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AT THE

VICTORIA AND PARADISE NURSERIES, UPPER HOLLOWAY, N.

1897

MDCCCXCVII.

Mo. Bot. Garden,
1898.

DEDICATED

BY SPECIAL PERMISSION

TO

H.R.H. The Princess of Wales,

BY

HER ROYAL HIGHNESS'

Very obedient and humble Servants,

ROBERT WARNER.

HENRY WILLIAMS.

PREFACE.

In bringing the Orchid Album to a close with the issue of the Eleventh Volume, I take the opportunity of expressing my deep obligation to the numerous lovers of Orchids who have continued to show their appreciation of this work, and who, by repeated contributions of material, have enabled us to place upon record so many striking and meritorious varieties, as well as typical forms which were, many of them at least, little understood or unknown and unfigured.

When the work was first commenced in 1882 it was scarcely anticipated that it would attain such enormous dimensions, and yet in spite of the many competitors in the same field, which, one by one, have subsequently made their appearance, it has been able to hold its own.

In scanning the title page of the first volume, it is with feelings of sad regret that I am reminded of the fact that of the four men concerned in its first production, three are no longer with us, Thomas Moore, Benjamin Samuel Williams, and Robert Warner, while of those connected with it subsequently, one also, William Hugh Gower, has joined the great majority.

HENRY WILLIAMS.

May, 1897.

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THE COLOURED FIGURES BY MISS G. HAMILTON.

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LONDON:
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AT THE
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CYPRIPEDIUM SEDENII CANDIDULUM.

CYPRIPEDIUM SEDENII CANDIDULUM.

[Plate 481.]

Garden Hybrid.

Epiphytal. Acaulescent, quite destitute of pseudobulbs, but producing a quantity of long strap-shaped *leaves*, which are persistent, sheathing at the base, channelled above, carinate beneath, and of a uniform full green. *Scape* erect, having numerous lateral branches, bearing many flowers, which in the best varieties have a beautiful pale ivory-white hue pervading the *sepals* and *petals*, and a pink pouch, but in other respects we fail to detect any difference in the blooms from the type.

Cypripedium Sedenii candidulum, *Reichenbach fil*, in *Gardeners' Chronicle*, 1884, xxii., p. 489.

Cypripedium Sedenii candidulum, *Lindenia*, vi., t. 245.

The variety of the plant which we here figure may be a somewhat high-coloured one, but as it is a hybrid that has been obtained by many, both amateurs and tradesmen, since the first was raised by Messrs. Veitch and Sons, it is difficult to obtain plants with the pure ivory-white flowers, such as the one originally sent out in the first place, which was the result of a cross between *C. Schlimii albiflorum* and *C. longifolium*. Many of the plants called *C. Sedenii candidulum* are the result of crosses from other plants.

The plant here figured flowered in our own collection, in the Victoria and Paradise Nurseries, in the course of the present year. It was grown in the temperature of the East Indian house, and we have observed on several occasions that many of these hybrids of *Selenipedium* do not in the least object to this heat, although their parents may have come naturally from places having a much lower temperature than is given them under cultivation. The Selenipediums or the South American Slipper family are a very robust class of Orchids, and they have characters which we have often thought amply sufficient to thoroughly establish them as a distinct genus, but it does not appear to have made any impression upon the majority of our Orchidists, although many genera are established upon much finer distinctions. These plants, although of robust constitution, require to be well drained, and nothing sour or stagnant should be allowed to lie or to gather about them. This should be carefully looked to, as upon good drainage we consider success or non-success in plant culture depends. Let the soil consist of a mixture of good brown fibrous peat and chopped sphagnum moss, with a little turfy light yellow loam added, but the latter should have most of the finer particles of soil shaken away, mixing with the whole some sharp Bedfordshire sand. During the summer season they require a liberal

supply of water to their roots, and they also enjoy a plentiful amount of moisture in the atmosphere, but, of course, the quantity will have to be reduced in the winter months; in fact, *C. Sedenii candidulum* thrives well side by side with the original *C. Sedenii*, from which it differs only in the colour of its flowers.

This Cypripedium may be said to be a perpetual bloomer, for if the old spikes are allowed to remain upon the plant they will continue to produce flowers for many months; on this account it will be found very valuable where cut flowers are required, especially where coat flowers are in demand, a single flower with a frond of Maidenhair fern making a very pretty combination.

Cypripedium Burtonii.—A very handsome and richly coloured hybrid raised by F. M. Burton, Esq., of Highfield, Gainsborough, to whom we dedicate it, although he has not kept the parentage in black and white, and consequently the records of its origin are gone; however, the plant remains. Mr. Burton himself suggests that its parents were probably *C. Lowii* and *C. Hookerae*, but it is a great pity that we have to go upon guess-work for the parents of such a fine hybrid. The foliage we know nothing about. The flower is in shape and build like *C. macropterum*, raised by Messrs. Veitch and Sons, of Chelsea, but in this case the colour is brighter and better than many others of the long-petalled varieties. The dorsal sepal is of good size, some two inches high by about one and a half wide, ovate, white, profusely veined with bright green; the lower sepal is of the same colour but much smaller. The petals are deflexed, more than three inches long and upwards of an inch wide, the apical half of a very deep red, the basal half green much spotted with black. The lip is close and compact, with a small opening, pale reddish on the upper side, pale greenish beneath veined with darker green, and deep crimson on the inner side.—W. H. G.

CHYSIS LŒVIS.

CHYSIS LAEVIS.

[PLATE 482.]

Native of Mexico.

Epiphytal. *Pseudobulbs* fusiform, slender, some twelve or fifteen inches long, bearing numerous leaves, the most of which are very fugacious; the permanent leaves are ovate-lanceolate, much plaited, and rich green. *Racemes* arising with the young growth, pendent, bearing from six to twelve flowers, which are thick and waxy in texture, spreading, yellow passing into orange, profusely spotted and blotched with crimson; *dorsal sepal* oblong, slightly inflexed, the lateral ones larger, falcate; *petals* falcate, all similar in colour; *lip* three-lobed, the lateral lobes rolled over the column, pale yellow dotted with crimson, front lobe somewhat orbicular, undulated at the edges, rich yellow, more or less spotted and streaked with crimson, having fine raised fleshy white ridges along the disk. *Column* deeply hollowed near the base, yellow dotted with reddish brown.

CHYSIS LAEVIS, *Lindley, Botanical Register*, 1840, miscell. 61. *Bateman, Orchidaceae of Mexico and Guatemala*, t. 31. *Reichenbach fil, Walper's Annales Botanices Systematicae*, vi., 492. *L'Illustration Horticole*, x., t. 365. *Warner's Select Orchidaceous Plants*, ii., t. 14. *Williams' Orchid Grower's Manual*, 6th edition, p. 211.

We have in the form here represented a remarkably fine variety of a very charming species. The plant originally flowered in the garden of Mr. Barker, of Springfield, Birmingham, some fifty years ago, that gentleman having introduced it from Mexico along with *Chysis bractescens*, a white-flowered species which was figured in Vol. x., Pl. 446, of this work. The plant there referred to is a spring bloomer, whilst the one now under consideration does not flower until the months of June and July, so that it may very justly be called a summer bloomer. It is much to be regretted that it still remains so scarce in our collections. We have seen another species frequently passed off for this plant (*C. maculata*), but as this has the power of self fertilisation, its flowers do not afford the grower much satisfaction. The plant here figured flowered in our establishment during the past summer, and was sketched by our artist, Miss Gertrude Hamilton, at our request, as it was such a fine-coloured variety.

Chysis laevis is, like all the other species and varieties of the genus, a deciduous plant, losing its leaves soon after it has ripened up its growth, when it may be kept cool and dry, giving it only just sufficient water to keep the bulbs plump and prevent them from shrivelling until the return of spring. As this species does not usually flower until *C. bractescens* and its congeners are over, it should be kept

in the cool house longer, and well shaded, so as not to excite it prematurely, but its growing season may be deferred for some little time. It succeeds well in a hanging basket or in a pot, but we prefer the first-named plan of growing it. The basket should be well drained, using for soil some good rough peat-fibre and sphagnum moss. When potted or basketed the plant should be removed to the heat of the East Indian house, kept well supplied with moisture at its roots, and also with a goodly quantity in the atmosphere; it should also be well exposed to sun and light, with the exception of the very brightest sunshine during the middle of the day, but even then, with a fair amount of air upon the structure in which it is grown, there will be little fear that its thin leaves will come to any harm. If it is desirable to increase the number of specimens, the spring of the year is the very best time to perform the operation, selecting those pieces having prominent and good eyes. We have seen some persons divide their plants without taking this care, but we would always impress this upon the minds of our readers, that unless good eyes are visible we should strongly deprecate the division of Chysis, or indeed of any other Orchid.

CYPRIPEDIUM SANDERIANUM MAUD

CYPRIPEDIUM SELLIGERUM MAJUS.

[Plate 483.]

Garden Hybrid.

Epiphytal. Acaulescent, quite destitute of pseudobulbs, leaves two-ranked, slightly channelled above, carinate beneath, coriaceous in texture, strap-shaped, acute, soft green in the ground colour, tessellated with a deep shade of green. *Flowers* in pairs, and in this variety very robust, and of a bright and cheerful colour, dorsal *sepal* somewhat orbicular, white, faintly tinged with pale green at the base, having numerous purple stripes running up it, these stripes having lateral branches which give them a somewhat feathery appearance, the lower sepal much smaller, but similarly coloured; *petals* strap-shaped, depressed, edged with a row of blackish hairs; the colour is rosy purple with darker veins, having a row of blackish purple wart-like spots along the upper margin; *lip* pouch-like, brownish purple, being veined of a deeper hue, paler beneath. *Staminode* pale green, bearing a few scattered hairs.

Cypripedium selligerum majus, *Veitch's Catalogue of New Plants*, 1878. *Lindenia*, i., t. 22. *Reichenbachia*, ii., t. 54. *L'Orchidophile*, 1890, p. 272.

This is a handsome garden hybrid raised by Mr. Seden, the worthy successor to the late Mr. Dominy, at Messrs. Veitch and Sons, of the King's Road, Chelsea. It is a cross between *Cypripedium barbatum* and *C. philippinense (C. laevigatum)*, and fully bears out what has been written about it, which is that it is one of the most stately Cypripediums in cultivation. This plant is much superior to the original *C. selligerum*, figured by us in the sixth volume of this work, at Pl. 255, partaking more of the characters of the first-named parent; indeed, it might have been the inverted cross, both in regard to the broad dorsal sepal of the flowers as well as in the tessellated foliage, which in the figure just quoted are plain green, without any tessellation at all. The present plate was sketched by Miss G. Hamilton from a plant which flowered in our own collection at the Victoria and Paradise Nurseries, Upper Holloway, during the remarkable season of 1893, but to which cannot be attributed any reason for its producing such fine and showy flowers, for we have had the same plant bloom equally as well in seasons that have been far less favourable and propitious.

Cypripedium selligerum majus is an evergreen plant, belonging to the coriaceous-leaved section of the Lady's Slipper Orchids, and it is very stately and handsome. It is a free-growing plant and a profuse bloomer when treated to good heat and a moist atmosphere. It is not surprising that this plant enjoys the heat of the

East Indian house, for both its parents are found in warm regions of the East, *C. philippinense* in particular being found near the sea level in very warm latitudes. It should be treated as a pot plant, and be well drained, so that any superfluous moisture may be easily carried away, for although this has the robust constitution of the majority of these hybrids, it will not thrive long if anything stagnant is allowed to accumulate about it. The soil should be about equal parts of brown upland peat-fibre and chopped sphagnum moss, adding a little turfy light yellow loam, which should have most of the fine mould beaten out of it, and be made very free and light, for we are under the impression that most of the strong-growing kinds thoroughly enjoy loam in a turfy condition, but we strongly object to the fine heavy portion coming in contact with the roots. Pot firmly and water freely in the growing season, and keep the atmosphere well charged with moisture. In the dull winter season, of course, less will be necessary, both to roots as well as in the atmosphere, but sufficient moisture must be retained in order to keep the leaves fresh and plump, for having no pseudo-bulbs care must be taken to keep the plants in good condition.

TRICHOCENTRUM TIGRINUM.

[Plate 484.]

Native of Ecuador.

Epiphytal. *Pseudobulbs* none. *Leaves* oblong, acute, channelled above, carinate beneath, somewhat thick and fleshy in texture, rich shining green, more or less freckled with reddish dots. *Peduncles* issuing from the base of the leaf, 1—2 flowered. *Flowers* upwards of two inches across, *sepals* and *petals* nearly equal, spreading, strap-shaped, lanceolate, acute, light yellowish green, freely dotted with brownish crimson; *lip* flabellate, emarginate in front, cuneate at the base, white, with rich yellow calli, and having a large blotch of rosy mauve on either side at the base. *Column* small, erect, thick and fleshy in texture.

Trichocentrum tigrinum, *Linden et Reichenbach fil*, in *L'Illustration Horticole*, 3rd series, t. 282. *Williams' Orchid Grower's Manual*, 6th edition, p. 589.

We have much pleasure in placing before our readers another portrait of these beautiful little gems, which received so much attention from Mr. Richard Pfau, a Swiss botanist, when collecting Orchids in Central America. Some of the more showy and interesting species we have from time to time figured in these pages, such as *Trichocentrum albo-purpureum*, Vol. iv., Pl. 204; *T. orthoplectron*, Vol. vi., Pl. 272; and now the beautiful species here figured; but the species which we take to be the finest and the most beautiful known is *T. porphyris*, which we hope to also lay before our readers on a future occasion, as well as the somewhat smaller-flowered *T. Pfavii* The present species, *T. tigrinum*, is a plant which so enraptured Reichenbach, when describing it, that he said it was a plant having the flowers of *Miltonia spectabilis* and the colouring of *Cattleya Aclandiae.* Without, however, quite endorsing this description, it is undoubtedly a singularly charming and beautiful plant. The specimen here figured flowered in our own establishment in the spring of the present year, at the Victoria and Paradise Nurseries, Upper Holloway.

These plants thrive best on blocks of wood, having a small quantity of sphagnum moss attached, but in such a position they require more attention and care than when growing in a closer and denser atmosphere; of course grown in baskets their roots would remain in a moister condition for a longer time on giving more water at once, but this we do not think a good thing for small-growing choice Orchids, and we prefer the case where fresh supplies are the more necessary, or placed in small earthenware pans, which must be well drained, and but a small portion of soil put about the roots. They should be

placed in a slightly shady position at the cool end of the Cattleya house, and although much less water should be given during the dull winter months than is absolutely necessary in the hot parching days of summer, yet at no time of the year should the plants be allowed to become dry, or they will suffer greatly. These are plants which grow freely, and soon spread, making a handsome mass; but from the fact of their growing upon almost bare blocks of wood, the roots are more dependent upon the moisture of the air, and such plants we have always found most difficult to establish; indeed, we have hitherto been under the impression that the various kinds of the genus *Trichocentrum* dislike division, but this may be overcome. They make numerous growing pointsor leads, some of which may be divided from the mother plant, and still be left upon the same block for months before transplanting them, which should take place in the spring of the year, just before the plants begin to grow. When securely fastened upon the new blocks, the plants may be placed in a slightiy warmer atmosphere kept duly moist; this will induce a more rapid growth, but these conditions should not continue for too great a length of time.

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„ „ **sinensis**... ...	42	0		63	0
Begonias, winter flowering ...	18	0		24	0
Bouvardias, of sorts	18	0		24	0
Camellias, of sorts...	30	0		42	0
Carnations, Tree, of sorts ...	18	0		30	0
Citrus sinensis, with fruits ...	42	0		60	0
Cyclamen, of sorts .. ... 18*s.*	24	0		30	0
Cytisus, very fine	18	0		30	0
Daphne indica rubra and **alba**	30	0		42	0
Deutzia gracilis, in pots... ...	18	0		24	0
„ **crenata fl. pl.**, in pots	18	0		30	0
„ **Pride of Rochester**, from the ground ...	18	0		24	0
Epacris, of sorts	24	0		30	0
Epiphyllums, of sorts	30	0		42	0
Ericas, of sorts ... ... 18*s.*	24	0		30	0
Gardenias, of sorts	24	0		30	0
Hydrangea paniculata grandiflora	12	0		24	0

	Per dozen.				
	s.	*d.*		*s.*	*d.*
Hydrangea paniculata grandiflora, Standards	30	0	&	42	0
Jasminum grandiflorum ...	30	0		42	0
Kalmia latifolia	30	0		42	0
Laurestinus, nice compact heads...	18	0		30	0
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Philadelphus coronarius (Mock Orange)				30	0
Primula sinensis alba plena...	18	0		24	0
„ „ double, of sorts	30	0		42	0
Prunus sinensis alba plena ...	18	0		30	0
Rhododendrons, hardy, choice selection ...	24	0		42	0
„ **præcox** ...	30	0		42	0
Roses, finest Teas and Hybrid Perpetuals, strong plants in pots, 18*s.*	30	0		42	0
Solanum hybridum Empress, and others	24	0		30	0
Staphylea colchica	24	0		30	0
Viburnum opulus (Guelder Rose)	24	0		30	0

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ONCIDIUM MACRANTHUM.

ONCIDIUM MACRANTHUM.

[Plate 485.]

Native of Tunguragua, Eastern Cordillera of Ecuador.

Epiphytal. *Pseudobulbs* ovate, smooth when young, becoming wrinkled with age, and bearing a pair of oblong, acute leaves, a foot or eighteen inches long, and light green in colour. The *scape*, which issues from the side of the pseudobulb near its base, assumes a scandent habit, its length depending upon the strength of the plant which bears it, the individual flowers being in some instances nearly four inches across. *Flowers* of a bright clear yellow, but in many varieties the sepals have a tinge of tawny brown; *sepals* and *petals* cordate, oblong in shape, rounded, obtuse, clawed, and undulated; *lip* small, as in all the section (Microchila) to which this species belongs, hastate, purple at the base, yellow at the tip, and furnished with a large crest of white.

Oncidium macranthum, *Lindley, Genera and Species of Orchidaceous Plants*, p. 205. *Ibid, Folia Orchidacea* (Art. Oncidium), i. *Ibid* in *Paxton's Flower Garden*, ii., p. 126; *Botanical Magazine*, t. 5743. *Warner's Select Orchidaceous Plants*, ii., t. 17. *Reichenbachia*, ii., t. 4. *Lindenia*, iv., t. 52. *Floral Magazine*, 1868, t. 386. *Williams' Orchid Grower's Manual*, 6th ed., p. 490, woodcut 491.

This is a plant which has been known to science considerably over a century, from the single flower which was acquired from the collection of Ruiz and Pavon, but we knew simply nothing of the species from a horticultural point of view until the year 1868, when it was brought to light by Mr. Denning, then gardener to Lord Londesborough, of Grimstone Park, near Tadcaster, who exhibited it before the Committee of the Royal Horticultural Society at South Kensington, the massive-flowered plant being most deservedly awarded a First Class Certificate. It was soon afterwards bloomed by several other patrons. It is a plant which we have found to be somewhat variable in the size and colour of its flowers, although this is nothing more than might be expected from seedling plants. The flowers are round and massive, but they differ from the majority of the species of this large family in being dependent for their beauty upon their sepals and petals only, and not upon that organ known as the lip, to which the species of this genus generally owe their charms. In some varieties the sepals are tinted with a shade of olive-brown; in the form here figured the flower is destitute of that somewhat sombre tint, and shines out in all the splendour of rich golden yellow. This plant flowered in our own collection in the Victoria and Paradise Nurseries, and represents an ordinary variety of this most desirable Orchid, which should be in every collection, being doubly valuable on account of the long lasting property of its flowers as well as its great beauty.

Oncidium macranthum is an evergreen plant, requiring to be grown in the coolest house; indeed, it grows at an elevation of 10,000 feet in the mountains of Ecuador, so that the very coolest place in the Odontoglossum house must be chosen for its reception. The plant is not a large rooter, so that it does not require an extra-sized pot, but it does like to be thoroughly well drained, in order to convey quickly away any excessive moisture that may be given it, and to keep everything about it in a thoroughly sweet and healthy condition. For soil use good brown peat fibre mixed with a little chopped sphagnum moss, and let the plants be kept growing all through the winter months; indeed, it is at this season of the year that usually the flower buds are swelling up on the spikes, and which take an immense time to come to perfection. It blooms in the spring months and lasts a considerable time in full beauty, and if the spikes are trained upon the rafters of the house, it will make a good contrast with the white flowers of the Odontoglossums which will be flowering beneath them, and in this manner both the Odontoglots and the Oncidiums show themselves to the very best advantage.

CYPRIPEDIUM SUPERBIENS.

[Plate 486.]

Native of Mount Ophir, Malay.

Terrestrial. Stemless, having distichous, oblong-ligulate leaves, which are keeled below, tessellated on the upper surface with pale and dark green, but of an uniform pale green beneath. *Scape* erect, bearing a large and showy solitary flower bract, short, much smaller than the ovary. *Flowers* about four inches across, dorsal *sepal* broadly ovate, acute, white, regularly streaked with pale green, the lower sepal much smaller, ovate-lanceolate, similar in colour to the upper one; *petals* slightly deflexed, oblong-ligulate, white, streaked with pale green, thickly spotted with dark blackish purple wart-like spots, and fringed on the margins with dark hairs; *lip* large, pouch-like, of a bright brownish green, flushed with purple in front, passing into light green beneath; the large infolded lobes are reddish crimson. *Staminode* sub-reniform, obtuse, white, netted with pale green.

Cypripedium superbiens, *Reichenbach fil.* in *Bonplandia*, 1885, p. 227. *Ibid* in *Xenia Orchidacea*, ii., p. 9, t. 103. *Warner's Select Orchidaceous Plants*, ii., t. 12. *Flore des Serres*, xix., t. 1996. *Williams' Orchid Grower's Manual*, 6th ed., p. 258.

Cypripedium barbatum superbum, *Belgique Horticole*, 1883, p. 97.

Cypripedium Veitchianum, *L'Illustration Horticole*, xii., t. 429.

Cypripedium barbatum Veitchii, *Flore des Serres*, xiv., p. 161, t. 1453.

This is a very fine form of the Slipper Orchid, and one that has been very useful to the hybridiser. We consider it one of the finest Cypripedes in cultivation, and we should recommend all collectors to have it in their collections as being a great beauty and free bloomer, added to which are its long-lasting qualities. It was one of the parents of that superb hybrid raised in the first place by Messrs. J. Veitch and Sons, of Chelsea, and named by them *Cypripedium Morganiæ*, since obtained in different varieties by other growers, and many other fine forms have also this plant as one of their parents. It has only been imported upon two occasions, the first time by Messrs. Rollisson and Sons, then of Tooting, and which was said to have been sent to them from Assam or from Java —two localities far enough apart to be easily determined, we should think. This plant passed into the hands of Consul Schiller, of Hamburgh, then an assiduous collector of new and rare species and varieties. The next time it came home it was sent to Messrs. J. Veitch and Sons, of Chelsea, from Mount Ophir, with a lot of *C. barbatum* collected by Thomas Lobb. These are the only occasions upon which it has been found in a wild state, which would lead one to infer it had a hybrid

origin, but the species to which we attribute its parentage has not been found growing in the neighbourhood. Much difference of opinion has arisen about the varieties of this plant, but as only two have been brought to us to obtain the whole stock from, it must be from cultivation alone that we have so many different forms varying both in the size of the blooms as well as in the depth of their colouring. The plant which we here figure flowered in the Victoria and Paradise Nurseries during the summer of 1893.

Cypripedium superbiens is a fine bold kind of the coriaceous-leaved section of this genus, and was one of the earlier arrivals, and still maintains its place as one of the finest amongst the numerous forms of these Slipper Orchids which are to be found in cultivation at the present day. It is a plant with bold leaves arranged in a two-ranked fashion, which are tessellated on the upper side, but of an uniform pale green beneath. The flowers are large and beautifully coloured, blooming from the month of May up till the end of July, the plant lasting fully half that time in full perfection. We grow it in a moist part of the East Indian house, and we find it to like good heat and moisture—in fact, when lacking the latter element we have found it to become affected by attacks of the red thrips, which is even more injurious to these plants, if possible, than the black thrips, and the marks made by them show even more on account of the pale green of the leaves. The plant likes good drainage, which should be kept in a free and open condition, using for soil some good brown peat-fibre and sphagnum moss in about equal proportions, with a little light turfy loam from which the greater portion of the fine soil has been beaten, and to be kept in a fairly moist part of the East Indian house.

LÆLIA GLAMUS TENEBROSA

LAELIA GRANDIS TENEBROSA.

[Plate 487.]

Native of the Sierra da Itaracea, Brazil.

Epiphytal. *Pseudobulbs* stout, club shaped, slightly compressed, bearing on the apex a single large leaf, which is obtusely oblong, coriaceous in texture and deep green in colour. The *spadix* is erect, and bears from three to five flowers, each flower being from six to eight inches across; *sepals* oblong-lanceolate, acute; *petals* much broader, beautifully crisped and undulated, of a rich coppery hue; *lip* three-lobed, the side lobes forming a long funnel-shaped tube which quite encircles the column; the front lobe large and spreading, undulated at the margin, having a pale border flushed with rose colour and a very large deep stain of blackish purple in the throat, from which run out numerous veins of the same colour. *Column* short, triangular.

Laelia grandis tenebrosa, *Gower*, in *Garden*, Feb. 10th, 1891, p. 36. *Reichenbachia*, p. 69. *Lindenia*, t. 290. *L'Orchidophile*, Dec., 1891.

This is a superb plant, for the introduction of which we are indebted to Mr. Sander, of St. Albans, and several other people, amongst them being Mr. Grimsditch, of Liverpool; Messrs. Charlesworth and Shuttleworth, of Bradford; and Mr. Travassos, of Liverpool. Mr. Sander tells us that for a long time after it had been imported by him with a coloured drawing it was declared to be by many of our leading orchidologists the true old plant, called *Laelia grandis* by Lindley; but that species, which was imported in quantity by Messrs. Low and Co., of Clapton, in 1864, is a much inferior plant to that here given. In the third volume of this work, Plate 123, a widely different plant is figured, which was imported by the Messrs. Low, and is the same as the variety shown by Lindley in Paxton's *Flower Garden*, in 1850, Vol. i., p. 60, f. 38. The plant we have now under consideration is both a larger grower and freer flowerer, and very much superior in colour; it was introduced in small quantities by various firms some five or six years ago. The numerous flowers received from various correspondents all prove it to be a most beautiful summer-flowering plant and a valuable acquisition to our collections. It appears to have been first imported by Mr. Travassos, of Liverpool, and flowered for the first time in the collection of H. Tate, Junr., Esq., of Allerton Beeches, Liverpool, in the spring of 1889. Since then it has been bloomed by many people, but of all that have been sent to us by various growers we have seen one only we could call a bad variety, the finest coming from the collection of G. Hardy, Esq., Timperley, Cheshire, and from Mr. J. Gordon, of Exmouth. The plant here figured was a good

ordinary variety which flowered with us in the Victoria and Paradise Nurseries, and was drawn by our artist, Miss Gertrude Hamilton. Any amateur possessing a plant of this variety, which has not flowered, may reasonably expect as good a form.

Laelia grandis tenebrosa is a robust evergreen plant which grows freely and flowers profusely. Recently it has become elevated to specific rank under the name of *L. tenebrosa*, but there is a great similarity to *L. grandis*, as will be seen by comparing the two figures named. It comes from the neighbourhood of Bahia, and consequently requires more heat and moisture than plants coming from farther south, otherwise it grows well under the same treatment as *L. purpurata*, *Laelio-Cattleya elegans* and others which require a little more heat during the winter months than is accorded *Cattleya Trianae* and others of the labiata group. When the plant has finished its growth it should be given a slight rest by removing it to a slightly cooler temperature and keeping it a little drier, but we object to its being subjected to thorough roasting. More can be done by resting Orchids in a cooler temperature than they have hitherto been growing in, and by withholding the greater part of the water-supply, than by the old-fashioned means of roasting and drying them, whilst the leaves are prevented from turning yellow and falling away and the pseudobulbs are saved from becoming wrinkled and shrivelled up.

DENDROBIUM DEVONIANUM

DENDROBIUM DEVONIANUM.

[Plate 488.]

Native of Northern India, &c.

Epiphytal. *Pseudobulbs* slender, terete, pendulous and jointed, some three or four feet long. *Leaves* linear-lanceolate, somewhat membranaceous, of a light green, and deciduous. *Flowers* singly or in pairs, produced in great abundance; *sepals* entire, lanceolate, white, tipped with bright rosy purple; *petals* the same colour, but much broader, being ovate in outline and ciliated; *lip* broadly cordate, fringed at the margin, white, with two large deep orange-yellow spots on the disc, and the point tipped with rich purple. *Column* white. *Spur* short.

Dendrobium Devonianum, *Paxton's Magazine of Botany*, iii., p. 169. *Botanical Magazine*, t. 4429. *Warner's Select Orchidaceous Plants*, ii., t. 11. *Flore des Serres*, iii., t. 649. *L'Illustration Horticole*, 1857, t. 145. *Belgique Horticole*, iii., p. 204. *Williams' Orchid Grower's Manual*, 6th ed., p. 279.

This is one of the most beautiful of the Dendrobes which have ever been discovered, although when first found it was considered doubtful if it would prove any good from a horticultural point of view, on account of its short rigid habit, but we have imported it from its native country, and found it always bearing the same habit that it has under cultivation. Our old friend Gibson had the pleasure of finding this species on the Khasia Hills, and he sent it to Chatsworth, where its first flowers opened in 1840. Since that time the plant has been found to be widely distributed, having been discovered in various other parts of northern India, and also in Siam, in Burmah, and the southern provinces of China, so that it has an extensive range. The plant here figured flowered in the Victoria and Paradise Nurseries in the summer of 1893.

Dendrobium Devonianum is a slender-stemmed pendulous plant, producing an abundance of its beautiful flowers, which have a charming effect when open; and one does not miss the leaves, from the stems being so well covered with blooms. It is, however, not seen in collections for many seasons in perfection, and yet it is a plant which can be grown with the greatest of ease, provided it gets an abundance of water to keep away the red-spider, which is its greatest enemy. For the copious supplies of water which the plant is to receive a good drainage should be provided, for whatever is given it must be drained away quickly, so that nothing remains about in a damp and decaying state, but everything about the plant must be kept in a thoroughly clean and comfortable condition, and all will go well. The plants, as their growths begin to ripen, should have the water supply curtailed,

until about the time when the slender stems are fully formed it should cease altogether, and the plants be removed to a cooler house, but fully exposed to the full effects of the sun, which will tend to finish off the bulbs and ripen them. This will speedily be shown by the falling leaves, and when they have all fallen the plant may be finally put to rest, having only just moisture enough given it to keep the bulbs in a plump, sound condition. The plants should be grown in hanging baskets, draining them thoroughly, and using for soil good fibrous peat and picked sphagnum moss in about equal parts; grown in this way the effect when in flower is most charming. In the growing season the plants should never be allowed to suffer from want of water; at that time they will require a good moist atmosphere, and be syringed two or three times a day, in order to keep that deadly pest the red-spider away, for these destroy the leaves and cause them to fall prematurely, thus weakening the bulbs, and when in this weak state they do not flower nearly so abundantly, nor with so much vigour. Its usual time of flowering is during the months of April, May and June, continuing about a week or fourteen days in full beauty.

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„ **Pride of Rochester**, from the ground ...	18	0		24	0
Epacris, of sorts	24	0		30	0
Epiphyllums, of sorts	30	0		42	0
Ericas, of sorts ... ... 18*s.*	24	0		30	0
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Hydrangea paniculata grandiflora	12	0		24	0

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Kalmia latifolia	30	0		42	0
Laurestinus, nice compact heads...	18	0		30	0
Lilac alba virginalis				42	0
„ **Charles X**....	30	0		42	0
„ **persica**	30	0		42	0
Philadelphus coronarius (Mock Orange)				30	0
Primula sinensis alba plena...	18	0		24	0
„ „ double, of sorts	30	0		42	0
Prunus sinensis alba plena ...	18	0		30	0
Rhododendrons, hardy, choice selection ...	24	0		42	0
„ **præcox** ...	30	0		42	0
Roses, finest Teas and Hybrid Perpetuals, strong plants in pots, 18*s.*	30	0		42	0
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OF

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AND

WILLIAM HUGH GOWER, F.R.H.S.

THE COLOURED FIGURES BY J. N. FITCH, F.L.S.

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LONDON:
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ODONTOGLOSSUM CORDATUM AUREUM.

ODONTOGLOSSUM CORDATUM AUREUM.

[Plate 489.]

Native of Mexico and Guatemala.

Epiphytal. *Pseudobulbs* produced from an ascending rhizome, oblong, obtuse, compressed at the edges, bearing a single leaf. *Leaves* oblong lanceolate, acute, sub-coriaceous in texture, six to seven inches long, and rich green. *Scape* erect, from one to two feet high, sometimes paniculate, bearing many flowers. *Bracts* boat-shaped, herbaceous, shorter than the ovary. *Flowers* bright and showy, some three inches across; *sepals* lanceolate-acuminate, the lateral much the longer, keeled behind, slightly channelled above, yellowish white, transversely barred with greenish yellow; *petals* shorter than the sepals and broader at the base, yellowish white, freely blotched and banded with greenish yellow, leaving the tips clear; *lip* clawed, cordate acuminate, waved at the edges, pure white. *Crest* bilobed in front, having a blunt tooth-like process on either side at the base. *Column* clavate, slightly hairy, and greenish white.

Odontoglossum cordatum, *Lindley, Botanical Register*, 1838, miscell. 90. *Id.*, xxvi., t. 66. *Id., Folia Orchidacea*, 1852, *Art. Odontoglossum*, No. 12. *Knowles and Westcott, Floral Cabinet*, t. 100. *Paxton's Magazine of Botany*, xii., p. 147. *Pescatorea*, 1860, t. 26. *Botanical Magazine*, t. 4878 (fig. as *maculatum*). *Gartenflora*, t. 356. *Bateman's Second Century of Orchidaceous Plants*, t. 167. *Id., Monograph of Odontoglossum*, t. 25. *Orchid Album*, iv., t. 186. *Williams' Orchid Growers' Manual*, 6th edition, p. 431.

Odontoglossum cordatum aureum, *supra.*

The typical plant, of which we here figure a variety, was introduced as long ago as 1837 by Mr. Barker, of Birmingham, with whom it flowered in the following year; but it soon slipped through the hands of the growers at home, and it was not until some sixteen or eighteen years later that it once more came to be a resident in our collections, whence it has never, we think, been absent since. It is a plant which some of our best men have confounded with another Mexican species (*O. maculatum*), but from which it is easily distinguished. The original species is one that should find a place in every collection, however small, for when strong, the spikes being so long they display their colour admirably, whilst the variety here figured contrasts well with it and the surrounding kinds which may be flowering at the same time. The plant here figured was drawn by our artist, Mr. J. N. Fitch, from a plant we imported ourselves a few years back, and although it is not so showy as some of the good types, it well deserves attention and cultivation for its distinctiveness.

Odontoglossum cordatum aureum is a dwarf-growing evergreen plant, which is easily grown into a good specimen. It requires to be kept in the cool house with other species and varieties of the genus, and we have found it to be a plant that enjoys good exposure to sun and light, but at the same time it must be shaded from the direct rays of the sun during the hotter parts of the day in the summer, in order to prevent the leaves becoming of a yellow and bad colour. It must be drained well, as it likes an abundant supply of water, and should be potted in good brown peat fibre and sphagnum moss, surfacing with some fresh living points of the moss, which when growing present a fresh and lively appearance.

Re-potting should be done about the beginning of October, as this allows the plants to become established and to grow through the winter months; they should therefore be kept moderately moist at this season of the year, and should they require re-surfacing in the spring, it can be done without injury to the roots. Propagation may be easily effected by dividing the rhizome, but this should be left until the plants begin to show signs of fresh growth, which may be somewhat a long time in appearing, especially if the division is left until the spring of the year. They must be kept free from all insect pests, but fumigating them in the ordinary manner we have found very deleterious; we therefore recommend those of our readers who have a collection large enough to warrant it, to use the "Thanatophore." The plants may thus be kept in a perfectly clean and healthy condition, and without loss of the leaves.

ODONTOGLOSSUM RAMOSISSIMUM.—A beautiful specimen of this useful species recently came from the famous collection of E. H. Woodall, Esq., Scarborough, and it is certainly one of the finest forms yet flowered. *Odontoglossum ramosissimum* has always been rare in cultivation, and the variety now before us is a grand acquisition. The flowers are large, and of the purest white, flushed at the base with reddish purple, the white portion of the segments being broad and undulated, and the whole flower is of a beautiful form. It is an exquisite variety. The typical plant usually bears a branching flower spike about two to three feet long, with many blossoms, and the individual blooms are two inches or more across, white and spotted more or less with purple; it enjoys cool treatment, and a plentiful supply of water during the summer, and also a moderate supply in the winter. It was first discovered by M. J. Linden, many years ago in New Grenada, at a very high elevation; and afterwards by Roezl, but was not introduced until about twenty-five years ago. There are other varieties that we have noticed at different times in various collections; a pretty form named *O. ramosissimum liliiflorum*, was introduced by Messrs. Rollisson and Sons, and another form at Sir Trevor Lawrence's, Dorking, being clear yellow instead of white, was very charming. There were also some fine varieties of this species in the collection of the late H. J. Buchan, Esq., at Southampton.—W. H. G.

drained pots, and potted in a mixture composed of good brown peat-fibre and chopped sphagnum moss. During the summer season it enjoys a liberal supply of water, but yet the superabundant quantity should be quickly carried away, so that nothing stale or stagnant remains about the roots. Care should also be taken in watering the plant just at the time when the young fresh growths are coming up, for if the water lodges in these it is apt to rot them, and thus spoil the flowering. During the winter also less water will be necessary, but the plant must by no means be allowed to become perfectly dry or its bulbs will shrivel and die.

ODONTOGLOSSUM RETUSUM *(Lindl.)*.—This charming species appears to always have been a rare plant in cultivation, and even at the present day, when we have so many Orchids, this Odontoglossum is seldom met with. We remember having imported some of it about twenty years ago from Ecuador, and the collector who sent it home reported having found it growing in a very cool temperature. However, the plants did not bloom with us from that importation, and consequently were not in much demand; therefore it eventually dropped out of cultivation in our establishments. We were recently in receipt of a portion of a spike of this species from Mr. Hughes, gardener to E. H. Woodall, Esq., St. Nicholas House, Scarborough, bearing about twenty pretty blossoms. Mr. Hughes says the plant had over a hundred blooms open, which must have been a charming contrast to *Odontoglossum Alexandrae, O. Pescatorei,* &c., with which he grows it, the same temperature suiting it admirably, and thriving well under the same treatment. It produces a spike alternately branching, bearing three or four blooms on each branch. The flowers are pendant, and as the name implies, bent back; sepals and petals are of a beautiful clear orange-red, and at the back of each is a big blotch of chocolate-brown; the lip is similar in colour to the sepals and petals, but brighter, with two or three tubercles at the base. The pseudo-bulbs of *O. retusum* are very different in appearance from any other Odontoglot—in fact, more resembling *Oncidium sarcodes,* without the reddish hue; they are light green in colour, and become slightly wrinkled with age, about six inches in height, tapering towards the top; leaves dark green. We cannot but congratulate Mr. Woodall upon having this beautiful plant in his fine collection, and we are sure that were it better known, it would certainly be much more grown than at present on account of its pleasing contrast when mixed with plants of other colours.—W. H. G.

MILTONIA SPECTABILIS.

MILTONIA SPECTABILIS.

[Plate 491].

Native of Sao Paulo, Brazil.

Epiphytal. *Pseudobulbs* produced at short intervals from a stout creeping rhizome, which roots from the under side; they are oval and ancipitous, bearing a pair of ligulate leaves which are thin in texture, and by exposure to the sun become, like the pseudobulbs, of a deep yellow hue. *Scape* clothed with large compressed bracts, which are flattened and two-edged, sheathing, and like the leaves of a yellowish hue, a large one enveloping the single flat flower. *Sepals* and *petals* oblong-lanceolate, nearly equal, slightly recurved, white; *lip* large, measuring two inches or more across, obovate, of a rich vinous purple at the base and along the veins, which passes out into a bright rosy crimson, and more or less freckled round the margin with pink and white. *Crest* yellow. *Column* white, having two wings at the side, which are somewhat triangular, and of a deep vinous purple.

Miltonia spectabilis, *Lindley, Botanical Register*, 1837, t. 1976. *Ibid*, xxiii., t. 1992. *Ibid.*, 1845, t. 8. *Paxton's Magazine of Botany*, vii., p. 97. *Botanical Magazine*, t. 4204. *Xenia Orchidacea*, i., p. 129. *L'Illustration Horticole*, ii., t. 216. *Britten and Gower's Orchids for Amateurs*, p. 97 (with woodcut). *The Garden*, xxxi., t. 593. *Williams' Orchid Growers' Manual*, 6th edition, p. 413.

Macrochilus Fryanus, *Knowles and Westcott's Floral Cabinet*, ii., t. 45.

Oncidium spectabile, *Reichenbach fil*, in *Walper's Annales*, vii., p. 759.

The plant here figured is one of the most beautiful we know. The genus was established upon this species, and named in honour of Viscount Milton, who at that time was an enthusiastic grower of Orchidaceous plants. It is now nearly sixty years ago since it was first introduced from Brazil, flowering for the first time with the famous firm at Hackney, the Messrs. Loddiges, where so many Orchids in the olden times have opened their first blooms in this country. We have upon several occasions received this species, with its variety *Moreliana* figured in this work, Vol. viii., t. 364, from Sao Paulo, which is one of the larger provinces of Brazil, comprising an area of about 127,000 square miles, and we suppose this plant comes from the warmer parts of that province. Since its first introduction it does not appear to have been lost, so this is another instance of the lasting qualities of Orchids under cultivation, and large specimens are from time to time to be seen. The plant which our artist has so faithfully depicted, flowered in our own collection in the Victoria and Paradise

Nurseries during the past autumn. It is a singularly beautiful form, having more white than is usually to be seen in the flowers, but is a somewhat variable species as far as the colours are concerned. These plants require to be grown at the cool end of the East Indian house, and should be placed in hanging baskets, so that they may be well exposed to the full light; they require to be shaded from the sun during the hotter part of the day, but only a thin shading material should be provided. They require during the growing season an abundant supply of water, and the atmosphere must also be kept well charged with moisture, but after they have finished their growth, and the flowering season is past, they should be removed to the Cattleya house or to some position where they may be cooler and kept comparatively dry. For soil use good brown peat-fibre, from which all the fine portion has been beaten, mixed with about an equal part of sphagnum moss, surfacing with the fresh picked living points, which grow and make a nice appearance and a soft bed for the young roots to work into. The best time to re-surface or to re-pot them is in the early spring, just as the plants show signs of starting into fresh growth.

MAXILLARIA VENUSTA

MAXILLARIA VENUSTA.

[Plate 492.]

Native of Venezuela and U.S. of Colombia.

Epiphytal. *Pseudobulbs* oval, much compressed at the sides, and bearing a single large leaf which is thick and coriaceous in texture and dark rich green in colour. *Scapes* slender, erect, furnished with long sheathing bracts, and bearing one large and showy nodding flower often measuring six inches across. *Sepals* and *petals* spreading, waxy in texture, the latter much the smaller; *lip* thick and fleshy in texture, three-lobed, the middle lobe ovate, reflexed, straw-coloured or buff-yellow on the upper side, creamy white beneath, and having a few spots of crimson on the disk; side lobes oblong, tipped with crimson. *Column* somewhat three-cornered, of a creamy white.

Maxillaria venusta, *Linden et Reichenbach fil.*, *Bonplandia*, 1854, p. 277. *Pescatorea*, t. 38. *Botanical Magazine*, t. 5296. *Bateman's Second Century of Orchidaceous Plants*, t. 118. *Britten and Gower's Orchids for Amateurs*, p. 105. *Williams' Orchid Grower's Manual*, 6th edition, p. 405.

Maxillaria anatomorum, *Reichenbach fil, Xenia Orchidacea*, i., t. 69.

Maxillaria Kalbreyeri, *Reichenbach fil*, in *Gardeners' Chronicle*, n.s., 1885, xxiii., p. 239.

The plant here figured is a great beauty to those who can appreciate pure white flowers, besides which it is also almost a perpetual bloomer, and it deserves a place in every collection of Orchidaceous plants. It was discovered upwards of fifty years ago by Linden on the mountains in Venezuela, but this discovery, however, did not result in living plants being brought to this country; and it was not until some twelve years later that his collector, Schlim, sent it home to him in a living state, and it flowered a few years afterwards. It gradually spread through the collections of Europe, and we do not think it has ever been absent from cultivation since. The plant belongs to a family which did not at one time occupy a very proud position in the Orchid world, the genus having been deprived of so many plants that from time to time have been consigned to other genera; but during the last decade or two, several large-flowered and handsome kinds have been added, of which *Maxillaria luteo-alba*, Vol. iii., t. 106, and *M. Sanderiana*, Vol. x., t. 463, have already figured in these pages. Both of these are grand species, well deserving of every attention, and together with the present species, *M. grandiflora*, *M. fucata*, *M. lepidota*, *M. leptosepala*, and some others have restored the genus again to popularity amongst Orchid growers. The plant we here delineate is one that flowered in our own establishment in the Victoria and Paradise Nurseries during

the past autumn, and where it is to be seen for the greater part of the season in flower.

Maxillaria venusta is a strong-growing but dwarf plant, producing stout bright green leaves, and flowers of a large size, which frequently measure some five or six inches across; these are thick and fleshy in texture, of the purest white, saving the lip which is yellow, blotched with dark purplish crimson. Its usual flowering season is during the autumn and winter months, but it will continue flowering during the whole summer, when the plant becomes thoroughly established, bearing a score or more of its pure, milky white flowers, and presenting, as some of our patrons have reported to us, a noble appearance. The plant comes from an altitude of 5,000 or 6,000 feet, and consequently requires to be grown in the coolest house, kept in a moist position, and in the shade. It enjoys an abundant supply of water, therefore it should be well and carefully drained. We like pot-culture for this plant best, and we find that it likes firm potting, using for soil good brown upland peat-fibre mixed with some chopped sphagnum moss. It likes to be kept moist all the year through, and a larger supply of water should be given during the summer; do not however, by any means stop the supply even in the winter season, but let it have enough to keep bulbs and leaves in a healthy condition.

Dendrobium Wardianum (Broome's var.).—This is one of the most distinct forms of *D. Wardianum* it has ever been our pleasure to see. We do not mean to infer that it is a gigantic coarse flower like so many we often notice, although it is of large size, splendid shape, and the colour especially is magnificent. We are in receipt of blooms of this variety from Jos. Broome, Esq., of Sunny Hill, Llandudno, and it is even finer in colour than the variety figured by Mr. Warner, in his *Select Orchidaceous Plants*, vol. i., t. 19. Judging by the beautiful colour, we are inclined to think that it must be from an importation from Assam, where the most beautiful varieties have been sent from. The sepals are of a lovely rosy magenta, deeply tipped with crimson, whilst the backs are entirely a very deep rosy hue of the same colour. Petals much broader than the sepals, white on both sides, and heavily tipped with magenta-crimson; the lip is large, of fine form, and recurved at the tip, where it is also marked with deep magenta-crimson, the remainder being of a rich orange-yellow, excepting a streak of white between these two colours, and two large dark maroon blotches at the base.—W. H. G.

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ODONTOGLOSSUM CRISPUM (ALEXANDRAE) WRIGLEYANUM.

[Plate 493.]

Native of Bogota, New Grenada.

Epiphytal. *Pseudobulbs* oblong ovate, about three or more inches in length, compressed, and with acute edges. *Leaves* borne in pairs at the apex, oblong lanceolate and acute, of a light green colour, and about a foot long. *Scape* radical, slender, sub-pendulous, and many-flowered, having acute bracts at the base of the peduncles. *Flowers* about four inches in diameter, of pleasing form, white, heavily shaded with crimson; *sepals* ovate lanceolate, undulated, white, deeply flushed with crimson, with several large blotches of a deeper shade, and with a pure white margin; *petals* broadly ovate lanceolate, of the same colour and markings, and more undulated at the margins; *lip* white, blotched and spotted with rosy red, marked with rich clear yellow on the disc al portion, and with a few lines of red at the base. *Column* arched, club-shaped, and reddish brown.

Odontoglossum crispum (Alexandrae) Wrigleyanum, *Williams' Orchid Grower's Manual*, 7th ed., p. 558.

Odontoglossum crispum Wrigleyanum, *Hort.*

This is without doubt one of the best and most handsome varieties of this well-known and useful plant, the flowers being of fine form, large, and very highly coloured. There have in recent years been many grand varieties in bloom from different importations, but none, we think, more beautiful than the one now under consideration; such grand forms as *Odontoglossum crispum (Alexandrae) Veitchianum*, *O. crispum (Alexandrae) Mundyanum* and others being more heavily spotted, but none are more chaste and graceful than this superb variety. Of spotted kinds we have many, such as *Stevensii*, *reginae*, *plumatum*, *Outramii*, *Cooksonii*, and *Duvali*, all these being familiar forms; but the forms mentioned above are decidedly superior, and nearly as good as the grand form in the celebrated garden at The Dell, known as *apiatum*. It is from Pacho, which is about thirty miles north of Bogota, that most of the fine spotted varieties have been procured; but it yet remains to be proved what produces these superb maculated varieties, and we think Reichenbach now would scarcely say, as he once did, "I never had any difficulty in recognising what is Mr. Bateman's *Alexandrae* and what is my *Bluntii*."

Odontoglossum crispum (Alexandrae) Wrigleyanum is named in honour of O. O. Wrigley, Esq., of Bridge Hall, Bury, and the plant from which our illustration was painted flowered during Whit Week, 1893, in the famous collection of

F. Hardy, Esq., of Tyntesfield, Ashton-on-Mersey, who we are pleased to see is following in his father's footsteps, and is buying only good plants. This beautiful specimen, as will be seen by the annexed plate, carried a fine spike of ten well-developed blooms, deeply coloured and finely spotted, and is well worthy to rank amongst the finest varieties in this gentleman's rich collection. The pseudo-bulbs and leaves are similar to other forms of *O. crispum* (*Alexandrae*), and when not in flower could not be distinguished one from the other. The management and culture are also the same as the type, and as this is one of our most popular Orchids, we do not consider it necessary to give details regarding its mode of treatment; suffice it to say that it enjoys a very cool and moist atmosphere, and should be shaded from the rays of the sun.

Eulophiella Elisabethae.—Quite a new genus has been established by the introduction of this most remarkable Orchid. It was recently flowered for the first time in this country by Sir Trevor Lawrence's Orchid grower, Mr. White, at Burford Lodge, Dorking, an establishment where new and rare plants always take a leading position. A beautiful plant was exhibited from this collection at the Royal Horticultural Society's meeting a short time since, when it received the much-coveted award namely, a First Class Certificate, and which it truly deserved.

Eulophiella Elisabethae, although having been introduced by two well-known firms, appears to be very difficult to procure in its native home, Madagascar. It is a very charming novelty, and will sure to become a universal favourite. The sepals and petals are pure white on the inner side, the latter being slightly flushed with rose. This appears on account of them being so heavily marked with crimson on the outer side, and consequently shows through. The lip is bright orange-yellow, with the side lobes and anterior point white. The whole bloom has a delicate wax-like appearance, and forms a striking contrast to the bracts, scape and pedicels, which are all of a deep crimson-purple. In shape and size the flower may be said to resemble that of *Odontoglossum citrosmum*, but with a smaller lip. The plant shown by Mr. White carried two fine spikes of flower, one having twelve and the other seven magnificent blooms fully developed, and both were produced from one growth, which at once indicates it to be a very free-flowering plant. Although this was the first occasion that this grand acquisition had been brought into flower in this country, it was shown once during the previous year at the great International Exhibition at Ghent (Belgium) by L'Horticulture Internationale, of Brussels, who were the first to introduce it on the Continent.—W. H. G.

CORDYCTUM SPECIOSA

COELOGYNE SPECIOSA.

[Plate 494.]

Native of the Salak Mountains, Java.

Epiphytal. *Pseudobulbs* ovoid, stuffed, angulate, about three inches high, tapering to a point. *Leaves* produced singly, they are oblong-lanceolate and acute, some twelve or eighteen inches long, strongly nerved and petiolate. *Peduncles* short, bracts sheathing and imbricating, mostly two-flowered. *Flowers* large, having the ovary very short and twisted, usually borne in pairs; *sepals* oblong-acute, keeled at the back; *petals* some two inches long, and very narrow; *lip* broad, very much larger than the other segments, three-lobed; the whole centre being netted with deep brown, the central lobe also is doubly crested, and it has a fringed crest running the entire length on either side; the front lobe is broad, of the purest white, dentienlate, and having a small sinus in the apical margin.

Coelogyne speciosa, *Lindley, Genera and Species of Orchidaceous Plants*, p. 89. *Ibid, Folia Orchidacea (Coelog.)*, No. 27, 1824. *Botanical Register*, 1847, t. 23. *Botanical Magazine*, t. 4889. *De Vriese, Illustrations d'Orchidées des Indes Orientales*, tt. 1—11. *Williams' Orchid Grower's Manual*, 7th ed., p. 210.

Coelogyne salmonicolor, *Reichenbach, Gardeners' Chronicle*, xx., p. 328.

Chelonanthera speciosa, *Blume, Bijdragen*, 1825, t. 50, p. 384.

This very interesting species of Coelogyne was first found by Blume on the Salak Mountains, Java, at some 4—5,000 feet elevation. He first figured it in his contributions to the Flora of Dutch India by the name of *Chelonanthera speciosa*, and under this name it long remained a puzzle to Orchidologists; but at last it cropped out that the plant was a true Coelogyne, and a genus founded by Lindley some two years previously. It was first introduced to our gardens in 1846, and Mr. Thomas Lobb found it again in the same locality in which it had been originally discovered.

Coelogyne speciosa is almost a perpetual bloomer, the broad white front lobe of the lip rendering it very conspicuous. The plant here figured was finely in flower in the month of September in our own Orchid collection, and from which our artist, Mr. J. N. Fitch, made the accompanying drawing; from that time to the present we have noticed various plants flowering in different collections. This is a plant which thrives best in a shady, cool position in the Cattleya house. The plant usually produces several buds besides the two which ultimately develop, and could we but induce the plant to open its other buds, we should have a specimen as remarkable for its beauty as the famous *C. cristata* and its varieties. It is a plant of very free growth and remarkable for the depth of colouring in its foliage, which at once

proclaims it to be a lover of moisture and shade, and under these conditions it thrives well. We have not tried the experiment as to whether the plant would develop more buds on the peduncle by giving it more heat, or if more flowers would arrive at maturity under a cooler regimen; but it is a subject worthy of the trial. This plant may be grown in a hanging basket, or as a pot specimen; but in either case it requires to be well drained, for as the plant likes an immense quantity of water, it must be allowed to run away quickly. The soil best adapted for its culture is good brown peat fibre, from which the fine soil has been shaken or beaten, mixed with chopped sphagnum moss, and to which may be added a few broken nodules of charcoal when potting. The temperature of the Cattleya house suits it best, but care must be taken to maintain a good moist atmosphere during the winter months.

Sale of the Late Mr. George Hardy's Orchids.—We were present at this sale, which took place at Manchester on the 9th and 10th of May, and were highly pleased to see the good prices that the well-known plants of this collection realised. It has been said by many of late that the price of Orchids is on the decline. This may be so in regard to imported plants; and no wonder, when we have novelties sold one day for good prices, and a few days after large importations arrive, when the same sized plants are sold for as many shillings apiece as they fetched pounds. This is not surprising, considering the reckless way some Orchid importers carry on their business, instructing their travellers to clear the ground wherever the Orchids are found. It may interest some of our readers to know the prices some of Mr. Hardy's plants fetched, also to know that the amount realised in the two first days' sale will nearly repay the cost of the entire collection, allowing, of course, for what has been sold during Mr. Hardy's lifetime, thus showing how much more profitable it is to purchase good things. Amongst the plants sold on the first day may be mentioned *Laelia Schroderi*, 38 guineas; *Cattleya intermedia alba*, 55 guineas; *Cattleya Mossiae Reineckiana*, 165 guineas; *Cypripedium Hardyanum*, 30 guineas; and *Cattleya Mendelii Firthii*, 70 guineas. On the second day *Cattleya Skinneri alba* fetched 46 guineas; *Laelia grandis tenebrosa* 43 guineas; *Cattleya Mossiae*, fine variety, 50 guineas; *Cattleya Skinneri alba*, 160 guineas; *Laelia purpurata Williamsii*, identical with the plant figured at tt. 9—10 of this volume, but erroneously named *Hardyana*, realised 130 guineas; and *Cattleya Mendelii*, Quorn House variety, 150 guineas.—H. W.

AËRIDES QUINQUEVULNERUM.

[Plate 495]

Native of the Philippine Islands.

Epiphytal. More compact in growth than any other of this genus. *Stem* erect, and bearing distichous light green leaves, from nine to fifteen inches in length, and from one-and-a-half to two inches in width, of a thick leathery texture, complicated at the base, and with the apex unequally bi-lobed. *Racemes* pendent, longer than the leaves, and many-flowered. *Peduncles* white, flowers sweetly scented, usually about an inch across. *Dorsal sepal* and *petals* nearly equal, oblong-obtuse, the two lateral sepals being much broader; all are very similar in colour, being French-white, with a few rosy purple spots and a heavy deep crimson-purple blotch at the end of each; *lip* three-lobed, cucullate, incurved into a horn-like spur of a greenish colour at the end, side lobes erect, white, flushed with rose, slightly spotted with rosy purple spots, and in the centre a deep crimson-purple blotch. *Column* creamy white.

Aërides quinquevulnerum, *Lindley, Sertum Orchidaceum*, t. 30. *Paxton's Magazine of Botany*, vii., 241. *Jennings' Orchids*, t. 30. *Lindenia*, iv., t. 150. *Williams' Orchid Grower's Manual*, 7th ed., p. 89.

Aërides jucundum, *Reichenbach fil, ex. Morren, Belgique Horticole*, 1876, p. 289.

Aërides Fenzlianum, *Reichenbach fil.*

This fine species was discovered by the celebrated traveller, Hugh Cumming, whilst collecting in the Philippines for Messrs. Loddiges, of Hackney, in whose nurseries it flowered as far back as the year 1837, and who in their time have flowered and introduced a great many new species and varieties, being quite enthusiastic Orchidologists. It is a plant that is found upon the stems and branches of trees in the hot, moist valleys of the Island of Luzon, and it requires a similar atmosphere to be maintained under cultivation. Its name applies to the very bright colours that are developed upon the tips of the sepals and petals, and which add materially to its beauty. *Aërides quinquevulnerum* blooms about the months of July and August, and it continues in flower a long time if not sprinkled with water from the syringe. The variety here portrayed was taken from a fine specimen that flowered in the Victoria and Paradise Nurseries in August of last year (1893), and which is a finely-spotted form. This species is a splendid free-blooming kind, and although not a new one, well deserves to be in every establishment where a collection of Orchids are grown. When in bloom it often lasts for several weeks in perfection, and makes a fine specimen foliage plant even when not in flower, resembling very much the family of Angraecums, Saccolabiums, and Vandas. The flowers are

produced on long drooping racemes from the axils of the leaves, and are not only exceedingly beautiful, but are also deliciously fragrant, filling the whole house with a delicate perfume. The sepals and petals are of a French-white, spotted with small rosy purple spots, and at the end of each is a deep blotch of crimson-purple colour. The lip is of a curious form, resembling a horn-shaped spur, greenish at the end, with a crimson-purple blotch in the centre, and also faintly spotted with rosy purple. The leaves are very thick and leathery, distichously arranged, and are very elegant and curving. A distinct character of this species is the complicate or pinched-up manner in which the leaves grow at the base, making it quite distinct from any other.

Aërides quinquevulnerum is of easy culture, and enjoys an abundant supply of heat and moisture, especially during the growing season. At this time a temperature of about 70° or 80° Fahr. will suit it admirably, but it must be shaded from the sun's rays. When resting, which is from about November to March, the temperature should be slightly less, with plenty of moisture about their roots, excepting in dull weather, when too much should not be given. They produce thick fleshy roots, and can be grown either in baskets or pots, the former being preferred by many growers. The best soil for them is sphagnum moss, and care must be taken to have the drainage well seen to, even more so than in many other Orchids, the pots or baskets requiring to be about three parts filled with potsherds. As many of the roots proceed from the upper part of the stems, and consequently remain in mid-air, an abundant supply of moisture in the atmosphere is very necessary.

CYPRIPEDIUM HYBRIDUM GOWERIANUM.—This is a bold and massive flower, and at the same time combining size and beauty in one, as may be imagined would be the result of a cross between two such grand species as its parents, namely, *Cypripedium Lawrenceanum* × *C. Curtisii.*

The whole flower is large and equally well proportioned, having a grand dorsal sepal, in shape similar to *C. Lawrenceanum*, white, striped with long and short veins of purplish brown, and heavily flushed with crimson almost to the apex. The petals are more deflexed than in the preceding-mentioned parent, green and purplish brown, and studded with several blackish wart-like spots on each. The lip is large and helmet shaped, and similar in form and colour to a good variety of *C. Curtisii.* The leaves are oval-oblong, about nine inches in length, and tesselated yellowish green, and deep green on the upper surface, the plant producing its bloom on a stout erect stem. This magnificent hybrid was exhibited by Messrs. F. Sander and Co. at the great Temple Show, and who are also the raisers of this variety.—W. H. G.

CYPRIPEDIUM STONEI PLATYTAENIUM

CYPRIPEDIUM STONEI PLATYTAENIUM.

[Plate 496.]

Native of Sarawak, Borneo.

Terrestrial. *Leaves* strap-shaped, twelve to eighteen inches long, coriaceous in texture, and bright green. *Scapes* nearly two feet long, dull purple, bearing three to five flowers. *Bracts* lanceolate, acuminate, sheathing. The *dorsal sepal* cordate, acuminate, white, usually with several broad blackish crimson streaks, which show through on both sides, lower sepals similar; *petals* linear, about six inches in length, which are drooping, with black hairs on the margin towards the base, a rich tawny yellow for more than half the length, the points brownish crimson; *lip* pouch-like, rose-colour, veined and reticulated with crimson, passing into white beneath, the infolded lobes of the mouth narrow, white. *Staminode* oblong, yellowish white, fringed with thick short hairs.

Var. platytaenium.—In this form the flowers are much larger, being some ten inches across the petals, and of a brighter colour. *Sepals* are broader, with bolder streaks; the *dorsal sepal* an inch-and-a-half broad, boldly streaked with brownish crimson, the lower sepal being larger than in the typical plant; *petals* an inch broad, white, tinged with yellow, profusely spotted and blotched with dark red-crimson, spots and blotches running into each other towards the tips.

Cypripedium Stonei platytaenium, *Reichenbach fil, in Gardeners' Chronicle*, 1867, p. 1118. *Warners' Select Orchidaceous Plants*, iii. t. 14. *Floral Magazine*, n.s., t. 414. *Xenia Orchidacea*, ii., p. 153, t. 161. *Veitch's Manual of Orchidaceous Plants*, woodcut, iv., p. 50. *Williams' Orchid Grower's Manual*, 7th ed., p. 303.

Cypripedium Stonei platytaenium. This variety cannot be called the poor man's Orchid, for we know of one or two specimens which exist which cannot be purchased under four figures, and we scarcely envy the position of those having such valuable plants under their care, for sometimes they become diseased and soon drop off, and all efforts to temporise or to stay the effects of the disease are quite unavailing. This plant has never been imported more than once. It was an accidental sport we should imagine, for we do not consider there is any reason to suppose it is a hybrid. A plant of it realised 140 guineas at the sale of the late Mr. Day's collection in 1881. A little later on a plant was again sold for 120 guineas, the first one in the first collection, and the second one in the second collection.

"The variety was imported with a lot of *Cypripedium Stonei* from Sarawak, in 1863, by Messrs. Low and Co., of Clapton. Some of the plants of this importation were purchased by the late Mr. Day, and amongst them—unknown to himself at the time—this superb variety, which for several years afterwards consisted of a single specimen, the only one known to have been imported.

"It flowered for the first time in Mr. Day's collection in 1867, whence subsequently it became very sparingly distributed by division of the original plant. On the dispersion of Mr. Day's plants in the spring of 1880 they were acquired by Sir Trevor Lawrence, Bart., and Baron Sir J. H. W. Schroeder; the last-named gentleman has since added several others of a small size to his collection, so that the majority of this plant is retained in these two magnificent collections."

The specimen here figured flowered in the fine collection of Baron Sir J. H. W. Schroeder, under the care of his able gardener, Mr. Ballantine. It is a grand flower, which has only on one occasion run back—the broad petals of this variety reverted to the original form—so that its durability remains fixed. This plant, like the typical one, is a native of Borneo, having been found in the neighbourhood of Sarawak just over thirty years ago, and this superb plant passed into the hands of Mr. Stone, who then had the charge of Mr. Day's fine collection, where it flowered in 1867. It is exactly like the typical plant in growth, the only difference being in the broader and shorter petals, and in their higher colour. It requires the warmth of the East Indian house in which to grow and develop its shoots, where it should be well exposed to the sun and light, and the atmosphere must be kept well charged with moisture. The pot for its reception should be well drained, using for soil some good light loam, mixed with a little leaf-mould or peat, and some charcoal added; and we prefer the plant to be raised a little above the pot's rim when potted, in order to allow all water to pass quickly away from it.

Orchids at Bletchley Park.—When visiting this place a few days ago we were much interested with the collection of Orchids recently formed here by H. J. Leon, Esq., M.P. Quite an extensive range of Orchid houses has been erected under the able superintendence of Mr. Hislop, the Gardener, who prepared his own plans, and carried out the work with his own mechanics. In these structures the plants seem quite at home, and at the time of our visit there was quite a goodly show of Odontoglossums in flower; many varieties of *O. crispum* were excellent. In the Cattleya house were many fine varieties of *C. Mendelii and C. Mossiae, Laelia purpurata*, and its variety, *L. p. Russelliana*. Here we also noticed many plants of Cattleyas with seed pods upon them; in fact it was evident, from the various plants we saw in seed all through the collection, that Mr. Hislop intends to be to the fore in this interesting branch of Orchidology, namely, the raising of Orchids from seed. In the East Indian house were some well-grown examples of Vandas, several plants of which were in flower, averaging from eighteen to twenty-four inches in height, *V. tricolor formosa* and *V. t. Warnerii* being especially noticeable. The Orchid houses are connected by two corridors, one at each end; one of these corridors is filled with Ferns planted out on a rockery artistically arranged by Mr. Hislop, and the other contains compartments for plants and potting sheds; there is also a division entirely devoted to Nepenthes.—H. W.

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—— —— —— gold striped ..	5	6	1	0
—— —— —— rose	12	6	1	9
—— —— —— scarlet ...	5	6	1	0
—— —— —— white ...	18	6	2	6
—— —— —— yellow ...	17	6	2	6
L'Immaculee, white	12	0	1	9
Le Matelas, rose	45	0	6	0
Pottebakker, white	17	6	2	6
Proserpine, deep rose ...	18	6	2	6
Vermilion Brilliant, vermilion	17	6	2	6

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Imperator rubrorum, crimson-scarlet	16	6	2	3
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Blue do. do. ...	—		15	0
Mixed, all colours	135	0	15	0

DOUBLE TULIPS.

Duc Van Thol	35	0	4	0
Red and Yellow	55	0	6	0
Scarlet	95	0	10	0
White...	45	0	5	0
Mixed, all colours	35	0	4	0

SINGLE TULIPS.

Crimson	45	0	5	0
Red and Yellow	70	0	7	0
Rose	95	0	10	6
Scarlet	55	0	6	0
White...	65	0	7	0
Yellow	120	0	13	6
Mixed, all colours	35	0	4	0

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Campanulata, blue... ...	25	0	3	0
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	Per 1000. s.	d.	Per 100. s.	d.
Large Golden Yellow ...	15	0	2	0
Large Blue	12	6	1	6
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Mixed, all colours	10	6	1	3

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Double and Single ...	21	0	2	6

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Double	40	0	4	6
Single (*Lent Lily*)	17	6	2	0

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Single Campernelle ...	42	0	4	6

NARCISSUS.

Pheasant's Eye	17	6	2	0
Double White	40	0	4	6
Biflorus	22	6	2	6
Incomparabilis (*Butter and Eggs*)	40	0	4	6
Mixed Hardy Narcissus ...	30	0	3	6
Polyanthus Narcissus, mixed	55	0	6	0

	Per 1000. s.	d.	Per 100. s.	d.
Anemone, Double, finest mixed	35	0	4	0
—— —— scarlet	60	0	6	6
—— **Single** ,, ...	22	6	2	6
—— —— mixed	22	6	2	6
Chionodoxa Luciliæ ...	45	0	5	0
Fritillaria meleagris, mixed	65	0	7	6
Gladioli, mixed, early-flowering	70	0	7	6
—— **Colvillii albus**... ...	—		4	6
Grape Hyacinths ...	20	0	2	6
Hyacinthus candicans ..	—		10	6
Iris, English, finest mixed ..	45	0	5	0
— **Spanish** ,, ..	17	6	2	0
—— **German** ,, ...	—		10	6
Ixia crateroides	40	0	4	0
Montbretia crocosmæiflora	—		10	6
—— **Pottsii**	—		8	0
Ranunculus, mixed Persian	20	0	2	6
Spring Snowflake	45	0	5	6
Star of Bethlehem	20	0	2	6
Triteleia uniflora	20	0	2	6
Winter Aconites	17	6	2	0
Wood Hyacinths (*Blue Bells*)	21	0	2	6
Orange Lily (*L. crocosum*) ...	—		21	0
Tiger Lily (*L. tigrinum*) ..	—		10	6
White Garden Lily (*L. candidum*)	140	0	15	0

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CATTLEYA LABIATA FOLEYANA.

[Plate 497.]

Native of Brazil.

Epiphytal. *Pseudobulbs* monophyllous, clavate, slightly compressed, six to ten inches in length, clothed with a greyish adherent sheath when young, furrowed and bare with age. *Leaves* coriaceous, oblong-obtuse, very persistent, six to nine inches long, and of a deep green colour. *Scape* proceeding from an elongated oblong compressed double sheath, of a palish green, two to five-flowered. *Flowers* of beautiful form and good substance, eight and a half inches in diameter; *sepals* lanceolate, entire at the margins, recurved at the tips, pure white; *petals* broadly ovate, two and a half inches wide, bluntish at the apex, finely undulated at the margins, pure white; *lip* three-lobed, side lobes folding over the column, front lobe ovate-oblong, well expanded, and pure white, with a deep orange-yellow throat, in front of which is a small blotch of delicate rose colour, bilobed at the front margins, much crisped and frilled. *Column* semi-terete, and grooved beneath, white.

Cattleya labiata Foleyana, *H. Williams, Williams' Orchid-Grower's Manual*, 7th ed., p. 170.

The true *Cattleya labiata* has been known for many years in English gardens, having been first imported from Brazil in the year 1818, but then only in small quantities, its habitat in Brazil for many years having been a puzzle to importers until we ourselves received a small importation through Mr. Clarence Bartlett, assistant curator to the Zoological Society of London; this gentleman received it through a friend who was engaged in engineering work in Brazil, but who did not know the exact spot from where he collected it, having sent other orchids home collected in different localities about the same time. It remained an exceedingly rare plant in our collections until quite unexpectedly a few years ago it was again discovered by the collector of the Horticulture Internationale of Brussels in the neighbourhood of Pernambuco, who sent it home believing it to be a new species; it was sent out by that firm as *C. Warocqueana*, but proved subsequently to be the old and much desired *C. labiata*; since that time it has been imported in large quantities by other importers, consequently many fine forms have recently flowered, but none we think more chaste and beautiful than the variety now before us, which originated two years ago in the gardens of Admiral Foley, at Fordingbridge, Hampshire. Our present illustration was taken from a plant which flowered in the collection of that gentleman, and it is with great pleasure that we are enabled to present to our readers such a fine white form of this most desirable Cattleya.

Cattleya labiata Foleyana is, like all the others of this type, an evergreen Orchid, the pseudobulbs or stems averaging from six to ten inches in height; it produces a rhizome which is about as thick as the little finger. During the young state these pseudobulbs are invested by a greyish membraneous sheath, which drops off as they become older, leaving them bare; they then gradually become furrowed. The coriaceous dark green leaves are borne on the tops of these bulbs singly, and often last on the plants for several years; from between these arises a compressed double sheath, which in the darker forms is usually tinted with purple, but in this variety it is whitish green. The flowers are borne sometimes in pairs, and as many as five have appeared on one spike, which make a very beautiful spectacle. The sepals and petals are of the purest white, the latter very broad and of fine form, being beautifully undulated; the lip is also of the purest white, excepting the deep orange-yellow stain in the throat, and a small rosy blotch in front of this latter; the margin is nicely crisped and fringed, the whole flower measuring quite eight and a-half inches in diameter. We have no doubt that this is the finest white variety of *C. labiata* that has yet flowered, and has been greatly admired by all who have seen it. This variety will succeed best with either basket or pot culture, in a nice compost consisting of good brown peat fibre and sphagnum moss, which should have good drainage. During the growing season, which is the spring and summer months, a liberal supply of water will be necessary, but after the growths are mature, sufficient just to keep the plants in a plump and healthy condition will be all that is required. This plant is specially valuable on account of the season in which it opens its lovely flowers, which is during October and November, when Orchid blooms are exceedingly scarce, more especially white ones. During the past few years, however, this disadvantage has been greatly improved upon, both in regard to the number of Orchid flowers we now have to brighten our houses during the dull months, and also by the increase of white varieties. We now possess many beautiful plants, such as hybrid Calanthes, several white forms of *Laelia anceps*, Cypripediums, Dendrobiums, etc., but none are so chaste and delicate, nor have such grand flowers as the subject of our present illustration. Orchid flowers when used for cut purposes and floral decorations have a decided advantage over almost all others, for, independent of their bright colours, they last for a considerable period in perfection, and blend well with any other kinds in season.

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CYPRIPEDIUM LAWREBEL.

[Plate 498.]

Garden Hybrid.

Epiphytal or terrestrial. *Leaves* springing from the crown of the roots, broadly oblong, acute, distichous, and radical, from six to nine inches in length, and from two to two and a-half inches broad, of a deep green colour, and heavily tessellated with yellowish green on the upper surfaces. *Scape* solitary, erect, about a foot in height, proceeding from the axil of the leaves, with an acute, oblong, sheathing bract near the top, from which the bloom emerges. *Flowers* very large, of beautiful form, very showy, and thick in texture; *dorsal sepal* large, broadly ovate, white, with deep vinous purple veins extending almost to the margin, and heavily suffused with rich rosy crimson, but leaving a pure white border, greenish towards the base; *lateral sepals* small, oblong, greenish white, with purplish crimson veins; *petals* broadly oblong, slightly deflexed, greenish at the base, of a rich rosy crimson, much darker towards the ends, and heavily spotted with large and small spots of blackish purple, these usually appear in radiating lines; *lip* very large, pouch-shaped, deep crimson-purple above, yellowish green below, inside greenish yellow, with dark purple spots. *Staminode* wax-like, and of a deeper crimson-purple than the pouch.

Cypripedium Lawrebel, *Lawrence, Gardeners' Chronicle*, 1892, xi., p. 502, as *C. Lawrebellum;* Id., 1892, xi., p. 560, fig. 82. *Williams' Orchid-Grower's Manual*, 7th ed., with woodcut, p. 273.

Without doubt this is one of the most beautiful hybrids ever raised, for although during the past few years this genus has been largely worked upon with such grand success by the hybridist, the subject of our present illustration must certainly rank with the finest, and take a first place in the best collections. This beautiful hybrid is also of great interest inasmuch as it is one of the first crosses with *Cypripedium bellatulum*. It was raised in the gardens of Sir Trevor Lawrence, Bart., at Burford Lodge, Dorking, and was obtained by crossing *C. Lawrenceanum* with the pollen of *C. bellatulum*, and we must certainly congratulate this skilled amateur upon the results of his work.

Cypripedium Lawrebel first flowered during April of 1892, and was exhibited at the meeting of the Royal Horticultural Society held at the Drill Hall, James Street, Westminster, on the 12th of that month, when it is needless to remark that it was the centre of very great attraction, and was unanimously awarded a First Class Certificate. The first seedling that opened its flowers from this cross, resembled more the pollen parent, but others that have flowered since partake more after *C. Lawrenceanum* both in size, manner of growth, and the colour of their leaves.

The name of this beautiful plant is derived from a combination of the names of its two parents. The plant here figured is evergreen and of robust habit, with fine large leaves from six to nine inches in length, and about two to two and a-half inches in breadth, very thick in texture; the upper surface is of a deep green ground colour, beautifully tessellated with a yellowish green shade. Even when not in bloom it is a very ornamental plant. The spike proceeds from the centre of the leaves, and stands erect, bearing a single flower of fine form, good substance, and richly coloured. The dorsal sepal is bold, erect, and flat, very broad, and of the purest white round the margin, greenish at the base, with numerous veins of deep vinous purple which extend almost to the edge and run through the whole centre which is heavily suffused with rich rosy crimson. The petals are broadly oblong, no doubt receiving the rounded shaped ends from the pollen parent, *Cypripedium bellatulum*, slightly deflexed, greenish at the base, changing into rich rosy crimson, and becoming much deeper towards the tips, which are heavily spotted with blackish purple in radiating lines; in some cases these appear in large wart-like spots with smaller ones between, and in other plants the petals are densely dotted all over. The lip, which is large and formed into a pouch, has much the shape of *C. Lawrenceanum*, but the lateral horn-like appendages are much less prominent; it is a lovely rich crimson-purple in front, whilst the underside is yellowish green, and inside it is greenish yellow with small blackish purple spots. The whole flower forms a very pretty contrast to all other varieties of this very popular genus, and combines good qualities from both its parents.

Cypripedium Lawrebel will succeed best if potted in good brown peat fibre and living sphagnum moss, or if some cultivators prefer it, a good mixture of turfy loam and fibrous peat, to which some sphagnum moss should be added to keep the soil more porous, and to allow the roots to push through more easily. The pots, however, should be well drained, as stagnation at the roots is very detrimental to the well-doing of this genus. A temperature similar to that maintained in the Cattleya house will be found to suit it admirably, and during the growing season a liberal supply of water is necessary. It must never, however, be allowed to become dry even in the dull winter months, although great care must be exercised in watering. The atmosphere should always be kept in a humid condition, to guard against the attack of thrips, which if allowed to become established will greatly disfigure and injure the plants. The flowers of this plant last for a considerable time in full beauty.

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BROUGHTONIA SANGUINEA

BROUGHTONIA SANGUINEA.

[Plate 499].

Native of Jamaica and Cuba.

Epiphytal. *Pseudobulbs* somewhat small, compressed, oblong-ovate, tapering at the tops, clustered, and marked with brownish scars of fallen bracts. *Leaves* borne in pairs on the apex of the pseudobulbs, linear, oblong, sheathing at the base, about four inches in length, olive-green in colour, and very thick and leathery in texture. *Scape* proceeding from between the leaves, terminal, slender, nodding, about a foot long, many-flowered, and with a small bract at each joint. *Flowers* about two and a half inches in diameter, of rich crimson colour, veined with a deeper shade, and very showy; *sepals* narrow, lanceolate, acuminate; *petals* broadly ovate, wavy, of a rich crimson throughout, as are also the sepals; *lip* roundish, cordate, with undulated margin, the front portion long and spreading, of a rich crimson, with a whitish blotch in the centre at the base, marked on the disk with orange-yellow, veined throughout with crimson, and with a slender spur at the base. *Column* very short.

Broughtonia sanguinea, *R. Brown*, in *Aiton's Hortus Kewensis*, ed. 2, v., p. 217. *Lindley Genera and Species of Orchidaceous Plants* p. 118. *Botanical Magazine*, t. 3076. *Veitch's Manual of Orchidaceous Plants*, Part vi., p. 131. *Williams' Orchid Grower's Manual*, 7th ed., p. 131 (with woodcut).

Broughtonia coccinea, *Hooker*, *Botanical Magazine*, t. 3536. *Hooker's First Century of Orchidaceous Plants*, t. 36. *Loddiges' Botanical Cabinet*, t. 793.

Epidendrum sanguineum, *Reichenbach* in *Walper's Annales Systematicae*, vi., p. 324. *Swartz Prodomus*, p. 124. *Van Houtte's Flore des Serres*, xxii., t. 2315.

This popular and beautiful Orchid has been an inhabitant of our gardens for a considerable number of years, in fact it may be classed amongst the very first of epiphytal Orchids that were cultivated in this country. Nevertheless it still remains one of the most beautiful at the present day, although not so gorgeous as some of the larger and richly-coloured Cattleyas. It is to be found in almost every collection, and is perfectly distinct, even when not in flower.

Broughtonia sanguinea is the only species in this genus that is in cultivation, and was first discovered by Mr. Walter Ewer, in Jamaica, where it grows in great abundance upon the branches of trees in close proximity to the seashore, and fully exposed to the sun. It flowers very profusely, and the brightness of its blossoms forms a beautiful contrast to any colours found in other Orchids. It was about the year 1793 that it was first found and sent to the Royal Gardens at Kew by the above-mentioned gentleman, when it was named by Dr. Robert Brown in honour of Mr. Arthur Broughton, an English botanist of that period. Since then

Professor Reichenbach has included it in the genus Epidendrum, but it is quite different in several particulars. It is also closely allied to Laelia and thus comes near to Cattleya in having four pollen masses; but the other organs of the flower, however, make it quite distinct from either of these. Our present illustration was prepared by our able artist, Mr. J. N. Fitch, from a plant which flowered in the Victoria and Paradise Nurseries, where we have always managed to flower it very freely during the summer months. It is a plant that has the great advantage of occupying but little space, and should therefore find great favour on this account, as many plants can be grown, especially where space is limited.

Broughtonia sanguinea is a dwarf evergreen plant, producing short pseudobulbs about two inches or more long, of a pale green colour; these support a pair of thick leathery leaves on the top, about four inches in length, of a deep olive-green, and linear-oblong in shape. From between the leaves the flower spike ascends, which is upwards of a foot long, and carries at the end many of the bright showy blooms which are borne on reddish purple-coloured pedicels. The sepals and petals are all of a rich crimson, the latter being very much broader and wavy, whilst the former are lanceolate and plain; the lip is fully an inch and a half in diameter, sub-orbicular, with fimbriated margin, and is also of a rich crimson, veined with a darker shade, and having a white blotch near the throat, where it is stained with deep orange-yellow. This plant is well deserving a place in every collection on account of the brilliant and distinct colours of its flowers, which last a long time in full beauty if they are not sprinkled with water from the syringe. If given the proper treatment, this plant is very easy to grow. We find it succeeds best when placed on a wooden block, with a very small quantity of sphagnum moss around its roots, only just sufficient to keep it moist being necessary. It should then be placed in a light position close to the glass, where it can obtain plenty of sunshine, which is very essential to induce it to bloom freely. It requires an occasional dipping in water, and the syringe should be used often, which will also keep the atmosphere in a nice moist condition. As this is a native of the tropics, it is only natural that it must have plenty of heat under cultivation, it should therefore be grown at the warm end of the Cattleya house, or amongst the East Indian Orchids.

CYPRIPEDIUM ADONIS.

CYPRIPEDIUM ADONIS.

[Plate 500.]

Garden Hybrid.

Epiphytal or terrestrial. Acaulescent. *Leaves* distichous, narrowly oblong, channelled, of a pale yellowish green colour, faintly tessellated on the upper side, and with a few reddish spots at the base beneath. *Scape* stiff, erect, solitary, about six or seven inches high, and with an oblong sheathing bract near the top, which embraces the pedicel. *Flowers* large, of good form, and very handsome: *dorsal sepal* of medium size, standard-like, slightly recurved, becoming reflexed with age, the upper portion being of the purest white, bright green at the base, with a well-defined centre line of deep purple, and with deep green veins; *lateral sepals* smaller, oblong, greenish white, with bright green veins; *petals* linear-oblong, prettily undulated on the upper margins, where they are slightly hairy, laterally deflexed, of a bright yellowish green colour, flushed near the base on the upper half with reddish brown, and with a central pronounced vein of deep purple; *lip* pouch-shaped, of medium size, with round everted auricles on each side, bronzy green, suffused and veined with light rosy purple, pale green beneath. *Staminode* very showy, large, of mauve-purple, with a dark marking in the centre.

Cypripedium Adonis, *H. Williams, B. S. Williams and Son's Catalogue of New Plants*, 1893, p. 7. *Williams' Orchid Grower's Manual*, 7th edition, p. 131.

This beautiful hybrid "Lady's Slipper Orchid" was raised in the Victoria and Paradise Nurseries, Upper Holloway, about five years ago, and is the result of a cross between *Cypripedium Spicerianum magnificum* and *C. Harrisianum superbum*, and which may be noted as being the reverse cross to our beautiful variety of *C. Pitcherianum*. It is quite distinct, however, from that plant, as may be seen by comparing our present illustration with plate 453 in the tenth volume of this work, where *C. Pitcherianum* is figured. Our present plate was drawn by our artist, Mr. J. N. Fitch, from a plant which flowered recently in our establishment, and which is a faithful representation of this beautiful hybrid. It is one of the very best forms obtained from the popular and pretty *C. Spicerianum*, which has so often been used by the hybridist as a parent plant. This last-mentioned species has since its introduction been brought so much into requisition, that it has produced quite a distinct type of Cypripediums, which could never have been obtained had it not fortunately been discovered and imported in such large quantities.

Cypripedium Adonis is a beautiful ornamental foliage plant, and although not one of the strongest-growing, produces its bright evergreen tessellated leaves very profusely, which considerably help to brighten the house when the flowers are past.

The flowers are a sweet combination of both parents, and will last a long period in perfection, providing they are kept free from damp. The dorsal sepal when young stands up bold and erect, but as the flower advances with age they become slightly reflexed, as is the case with most crosses from *C. Spicerianum*, and this is even the case with that species itself. The upper half is of the purest white, and the remaining part of the base is of a bright green, with a strongly marked central line of deep purple, and deep green veins which run up into the white portion. The petals are of beautiful form, fairly long and broad, beautifully undulated on the upper margin, on which are a few rosy-coloured hairs; they are of a delicate bright yellowish green, suffused near the base on the upper half with reddish brown, and each have a well-defined midrib of deep purple. The lip or pouch is somewhat bell-shaped, and of good medium size, with the everted auricles on each side very prominent; it is of a bright bronzy yellow, deeply flushed and veined with light rosy purple. The staminode in this variety is very conspicuous, large, and of mauve-purple colour marked in the centre with dark green.

Cypripedium Adonis thrives best with pot culture, and should be placed in well-drained pots, with a compost of good fibrous peat and sphagnum moss; the plants should be well elevated above the rim, and fixed firmly, although not rammed in. It succeeds well in the Cattleya house temperature, and should be treated similar to all other evergreen Cypripediums, and never be allowed to become dry. This beautiful and interesting novelty is quite distinct from anything yet in commerce, but it must not be confounded with the *C. Adonis* which is reported in the pages of the *Orchid Review* for October, 1893, where it is stated that a plant under this name was exhibited by C. J. Ingram, Esq., of Godalming, as a cross between *C. hirsutissimum* and *C. Curtisii*, which must be quite a distinct hybrid from our present subject.

CYPRIPEDIUM CALLOSUM SANDERAE.—This lovely variety of *Cypripedium callosum* is without doubt one of the most beautiful acquisitions introduced in recent years. It was shown by Messrs. F. Sander and Co., of St. Albans, at the Temple Exhibition in May, 1894, for the first time, where it was a great attraction, and was unanimously awarded a First Class Certificate. The plant exhibited bore leaves identical with the species, and carried one flower of grand form, as large as the very best form of the type. The dorsal sepal is bold and stands quite flat, pure white, and distinctly veined about half-way up with emerald green. The petals are drooping, as is the case with *C. callosum*, of a delicate shade of green about two-thirds of their length, the tips being slightly reflexed and pure white. The whole lip, which is of good shape, is of an emerald green colour throughout. This superb variety, which well merits the award bestowed upon it by the Orchid Committee of the Royal Horticultural Society, bears the same relation to *Cypripedium callosum* as *C. Lawrenceanum Hyeanum* does to that species, but is decidedly more beautiful and more graceful in shape; and all enthusiasts of this popular genus who have seen it will greatly desire to have it numbered amongst their own collections.—W. H. G.

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COELOGYNE CRISTATA.

[Plate 501.]

Native of Northern India.

Epiphytal. *Pseudobulbs* oblong, becoming somewhat angulate, produced from a thick scaly rhizome, two-leaved. *Leaves* linear-lanceolate. *Scape* radical, erect, bearing a drooping raceme of flowers, five to eight in number. *Flowers* large, about five inches in diameter; *sepals* oblong-lanceolate, acuminate, undulate, pure white; *petals* similar in form to the sepals, but broader, pure white; *lip* three-lobed, concave, pure white, furnished in the centre with five parallel longitudinal lamellae, which are fringed, deep yellow in colour. *Column* white.

Coelogyne cristata, *Lindley, Collectanea Botanica*, sub. t. 33. *Genera and Species of Orchidaceous Plants*, p. 39. *Botanical Register*, 1841, t. 57. *Folia Orchidacea, Art. Coelogyne*, No. 20. *Pescatorea*, t. 25. *Gartenflora*, t. 245. *Warner's Select Orchidaceous Plants*, i., t. 35. *Flore des Serres*, t. 1807. *Jennings' Orchids*, t. 7. *Paxton's Flower Garden*, iii., p. 171, fig. 312. *Gardeners' Chronicle*, n.s., 1877, vii., p. 597, fig. 95 (specimen plant). *Id.* 3rd series, 1888, iii., p. 489, fig. 68. *Moore's Illustrations Orchidaceous Plants, Coelogyne*, t. 4. *L'Orchidophile*, 1888, p. 212. *Journal of Horticulture*, 1888, xvi., p. 197, fig. 25. *Revue d'Horticulture Belge.*, 1889, p. 85, t. 8. *Veitch's Manual of Orchidaceous Plants*, vi., p. 34. *Williams' Orchid Grower's Manual*, 7th edition, p. 204.

This is a most chaste and lovely Orchid, and although one of the oldest inhabitants of our stoves, is nevertheless always welcome to Orchid growers; it blooms in the winter months at a time when flowers are in great demand, and so useful are its white elegant flowers for decorative and cutting purposes that some growers have houses full of it. In addition to the useful purposes that the flowers may be put to, the plant itself is very ornamental, its large plump glossy dark green bulbs and leaves being by no means unsightly, as are many of our Orchids when out of flower. It was discovered by Dr. Wallich in the mountain region of Nepaul, and was first flowered by Mr. Barker, of Birmingham, in 1841.

Coelogyne cristata is of dwarf habit of growth, producing its dark green bulbs and leaves in profusion, and flowering most abundantly, its spikes of flowers being produced in great profusion from the base of the bulbs. There are several varieties of this species, which vary considerably from the pure white *C. cristata alba*, figured on plate 54 of the second volume of this work, to the deep orange-lipped form of the original type; then there are *C. cristata citrina* with its pale yellow crests of the lip, another form a little darker called Day's variety, and the giant form which is known under the names of *major* and *maxima*. The present subject may be said to be everybody's Orchid, as it is so easy of cultivation and so useful

from every point of view; it is one that beginners may safely venture upon trying to cultivate

This plant should be grown in a pot, or it may be equally well grown in pan or basket suspended from the roof of the house, in a compost of good fibrous peat and sphagnum moss and good drainage, and be placed in the cool house while making its growth; it may also be grown in a warmer temperature with equal success. When grown cool the spikes are very liable to damp and turn black, and should when first showing themselves be removed to a warmer temperature. It requires an abundant supply of water during the growing season, and a good period of rest when a little water will suffice. It is subject to the attacks of scale, which should be diligently sought for and carefully removed. This plant is propagated by division of the rhizomes with a few bulbs attached to each portion.

PHAJUS GRANDIFOLIUS.

PHAJUS GRANDIFOLIUS.

[Plate 502.]

Native of China and Australia.

Terrestrial. *Pseudobulbs* ovate, produced from a creeping rhizome, and sheathed by the bases of the leaves. *Leaves* oblong-lanceolate, acute, plicate, about three feet long, including the petiole. *Scapes* radical, stout, three feet or more high, terminating in an erect raceme, bearing from twelve to eighteen flowers. *Flowers* four inches in diameter; *sepals* and *petals* sub-equal, oblong-lanceolate, acute, the outer surface white shaded with rose, the inner surface pale chocolate-brown, margined and veined with yellowish brown; *lip* oblong, cucullate, the base folded over the column, rosy purple outside, stained with crimson-purple near the anterior edge, the throat golden yellow veined with crimson, margined with rosy purple.

Phaius grandifolius, *Loureiro, Flora Cochin Chinensis, Edition Ulyssipone*, p. 529; *Edition Willdenow*, ii., p. 647. *Schneevogt, Icones Plantarum rariorum*, t. 5. *Hooker, First Century of Orchidaceous Plants*, t. 37. *Andrews, The Botanists' Repository*, t. 426. *Flore des Serres*, t. 738. *Redouté, Les Liliacées*, t. 43. *Kerner, Hortus sempervirens*, t. 49. *Gardeners' Chronicle*, 1872, p. 733, f. 176; *Id.* n.s., 1882, xviii., p. 565, f. 99. *Veitch's Manual of Orchidaceous Plants*, vi., p. 11. *Williams' Orchid Grower's Manual*, 7th edition, p. 653.

Bletia Tankervillae, *R. Brown, Hortus Kewensis*, 2nd edition, v., p. 205. *Loddiges, Botanical Cabinet*, t. 20. *Botanical Magazine*, t. 1924.

Limodorum Tankervilliae, *Aiton, Hortus Kewensis*, 1st edition, iii., p. 302, t. 12. *L'Heritier, Sertum Anglicum*, t. 28.

Limodorum Incarvillei, *Persoon, Synopsis*, p. 520.

This truly noble Orchid has been an inmate of our gardens for upwards of a century, having been introduced from China by Dr. John Fothergill about 1778. When grown in large specimens it is a very imposing object, especially if well flowered, for not only are the spikes large and many-flowered, but the individual blooms are of a soft pleasing colour, and the white exteriors of the sepals and petals contrasted with the brownish colour of the interior are a very distinct feature and one seldom met with in Orchids. The spikes are generally about three feet in length, and when well cultivated it forms a most useful object for the decoration of apartments and the conservatory, where it will stand a long time if kept from the damp. The name of *Bletia Tankervillae* was, we believe, first published by L'Heritier, and was proposed in honour of Lady Tankerville; the assertion in Persoon's *Synopsis* that the name of "Tankervilliae" was improperly given to the plant by Mr. Aiton, and that it should have been "Incarvillei," being dedicated

to the memory of Father Incarville, is therefore altogether erroneous. The plant above referred to was flowered in 1817 by John Walker, Esq., of Arnos Grove, Southgate.

Phajus grandifolius is an evergreen terrestrial Orchid with largish ovate pseudo-bulbs, and oblong-lanceolate plicate leaves. The flowers, which measure as much as four inches across, are borne on radical scapes three feet and upwards in height; the oblong-lanceolate sepals and petals are white on the outer surface and of a pleasing chocolate-brown on the inner side, while the lip, the base of which is folded over the column, is white stained with yellow in the throat and disk, and veined with crimson, the sides of the convoluted part being also stained with crimson within and without.

Phajus grandifolius should be cultivated in a pot, in a compost of good fibrous loam, leaf-mould and decayed cow manure, with a little sand added. This plant, if allowed plenty of pot room, will obtain large dimensions, while moderate applications of liquid manure will be found especially beneficial, ensuring not only vigorous growths but also beautiful healthy foliage, thereby greatly increasing its ornamental value. It should be grown in either the Cattleya or East India house, as it requires an abundance of heat and moisture during the growing period, but care should be taken not to touch the young growths. When at rest a cooler atmosphere will suffice. This plant is subject to the attacks of the scale and thrips, which may be kept in check by steaming tobacco juice in the Thanatophore. It is propagated by division when the blooming season is past.

PLEIONES

PLEIONE MACULATA.

[Plate 503. Fig. 1.]

Native of Northern India, Khasia and Assam.

Terrestrial. *Pseudobulbs* round, depressed, tuberculate at the base, glossy dark green, infested with the imbricating bases of the decayed leaves. *Leaves* produced before the flowers, lanceolate, plicate, six inches long. *Flowers* two inches across, solitary, produced from the side of the pseudobulbs on short peduncles; *sepals* and *petals* similar, linear-lanceolate, acute, white; *lip* oblong, three-lobed, white, the side lobes narrow, folded over the column, marked inside with oblique purple lines; front lobe broad, ovate, retuse, waved, and barred with crimson-purple at the margin; the yellow disc bears over its whole length, five elevated fringed lamellae with purple lines between. *Column* slender, semi-terete, white with two red streaks in front, the apex dilated into a petaloid white hood, toothed on each side.

Pleione maculata, *Lindley, Paxton's Flower Garden*, ii., t. 39, fig. 1. *Veitch's Manual of Orchidaceous Plants*, vi., p. 56. *Williams' Orchid Growers' Manual*, 7th edition, p. 684.

Coelogyne maculata, *Lindley, Genera and Species of Orchidaceous Plants*, p. 43. *Wallich, Plantae asiaticae rariores*, i., t. 53. *Folia Orchidacea, Art. Coelogyne*, No. 40. *Botanical Magazine*, t. 4691. *Flore des Serres*, t. 1470. *Lemaire, Le Jardin Fleuriste*, t. 93.

Gomphostylis candida, *Wallich, unpublished drawing in Kew Herbarium.*

This little gem belongs to a genus of Orchids which we regret to say is much neglected by Orchid growers. Why this is the case we cannot surmise, as Pleiones are very accommodating, taking up but little room and producing a profusion of flowers at a time of the year when they are most valuable; it may be on account of their habit of flowering without the leaves. This drawback, however, may be obviated by the introduction of a few Ferns into the house where the plants are flowering, which intermixed with the plants in flower will produce a charming effect. *Pleione maculata* was first found by Mr. Simon, and sent by him to the Royal Gardens, Kew, from Khasia and Assam, where he found it growing on rocks. Pleiones are included by some authors under *Coelogyne*, from which genus they differ but slightly; the habit of growth is, however, quite different, being deciduous. They are commonly called Indian Crocus, and form a pretty feature in the Indian Alps, where they flower most profusely. There is a very beautiful variety of this called *Virginea*, with the lip pure white, saving the yellow stain in the throat the purple lines being entirely absent.

Pleione maculata should be grown in a pot, in a mixture of loam, peat and

moss, with a little sand added to keep the compost open; it requires plenty of drainage and a liberal supply of water while in growth, the waterings being gradually reduced until the plants become dry. A season of rest is necessary until they commence to show flower during the autumn and winter months, when water should again be given them. They can either be grown in the Cattleya or East Indian house, and are increased by division.

PLEIONE LAGENARIA.

[Plate 503. Fig. 2.]

Native of the Himalaya Mountains.

Terrestrial. *Pseudobulbs* clustered, flask-shaped, flattened below the conical neck, light green spotted with brown, bearing in the young state a solitary leaf at the apex. *Leaves* narrow, lanceolate, eight to ten inches long. *Scapes* short, springing from the base of the pseudobulbs. *Flowers* large, solitary, three inches in diameter; *sepals* and *petals* lanceolate, the former narrower than the latter, both of a pleasing rosy purple or lilac-rose; *lip* white, convolute, the side lobes whitish, striped with purple inside, the front lobe emarginate, expanded, the disk yellow, traversed by five bearded purplish ridges, the edge of front lobe wavy white, with transverse bars and blotches of deep purple-crimson. *Column* elongate, winged at the apex.

Pleione lagenaria, *Lindley, Paxton's Flower Garden*, ii., t. 39, fig. 2. *Warner, Select Orchidaceous Plants*, i., t. 17. *Jennings' Orchids*, t. 47, fig. 1. *De Puydt, Les Orchidées*, t. 36. *Veitch's Manual of Orchidaceous Plants*, vi., p. 56. *Williams' Orchid Grower's Manual*, 7th edition, p. 683.

Coelogyne lagenaria, *Lindley, Folia Orchidacea, Art. Coelogyne*, No. 39. *Reichenbach, in Walper's Annales*, vi., p. 234. *Botanical Magazine*, t. 5370. *L'Illustration Horticole*, t. 510. *Flore des Serres*, t. 2386. *Lemaire, Le Jardin Fleuriste*, t. 93. *Bateman, Second Century of Orchidaceous Plants*, t. 107.

This is a fitting companion for the preceding species, and grows well in company with it, the brilliant lilac-rose sepals and petals contrasting well with the white flowers of *Pleione maculata*. It flowers generally after the other varieties and species of Pleione are over, in January and February. The culture of this species is the same in all respects as that recommended for *P. maculata*.

SOPHRONITIS GRANDIFLORA

SOPHRONITIS GRANDIFLORA.

[Plate 504.]

Native of the Organ Mountains, Brazil.

Epiphytal. *Pseudobulbs* short, one to two inches long, oblong-cylindraceous, bearing a solitary elliptic coriaceous leaf, two to three inches long. *Scape* terminal, springing from the apex of the immature pseudobulbs, short, one-flowered. *Flowers* about two to three inches in diameter, of pleasing form and colour; *sepals* oblong-lanceolate, bright cinnabar or deep crimson-scarlet; *petals* broadly ovate, acute, bright cinnabar or deep crimson-scarlet; *lip* three-lobed, front lobe acuminate, side lobes incurved, yellow streaked with crimson. *Column* free, winged at the apex, wings entire, connivent upon the crest of the lip, yellow.

Sophronitis grandiflora, *Lindley, Sertum Orchidaceum*, t. 5, fig. 2. *Botanical Magazine*, t. 3709. *Paxton's Magazine of Botany*, ix., p. 193 (with plate). *Flore des Serres*, i., t. 19. *Walper's Annales Botanicae Systematicae*, vi., p. 465. *Hartinger Paradisus Vindobonensis*, i, t. 15. *Moore's Illustrations of Orchidaceous Plants (Sophronitis)*, t. 1. *Jennings' Orchids*, t. 5. *Floral Magazine*, t. 329. *Warner's Select Orchidaceous Plants*, iii., t. 3. *Hooker's First Century of Orchidaceous Plants*, t. 41. *De Puydt, Les Orchidées*, t. 41. *Paxton's Flower Garden*, iii., p. 10, fig. 237. *Revue d'Horticulture Belge*, 1887, p. 5 (plate). *Revue Horticole*, 1887, p. 492 (with plate). *Lindenia*, iv., t. 161. *Gardeners' Chronicle*, 3rd series, 1891, ix., p. 669, fig. 127. *Veitch's Manual of Orchidaceous Plants*, ii., p. 106. *Williams' Orchid Grower's Manual*, 7th edition, p. 715.

Cattleya coccinea, *Lindley, Botanical Register*, sub. t. 1919.

This is a charming dwarf-growing epiphytal plant, with large showy flowers. It was first discovered many years ago in Brazil by M. Descourtilz, upon the high mountains that separate the district of Bannanal from that of Ilha Grande, where it grows in abundance upon fallen and decayed trees; and was found also by Mr. Gardner on the Organ Mountains. It was first flowered in the nurseries of Messrs. Loddiges, of Hackney, in 1841. It may truly be said to be a miniature-growing plant, growing in large tufts, as described above. There are two or three forms of this plant, one with rose-coloured flowers, and the other with pale vermilion colour. It is a charming plant for growing amongst cool Orchids, its brilliant scarlet flowers contrasting well with the other kinds, more especially *Odontoglossum crispum*. It is a plant that should be in every collection, as it will be found invaluable, flowering as it does during the winter months; indeed, a quantity of plants is desirable as taking up but little room, it being so easily accommodated.

Sophronitis grandiflora produces oblong-cylindrical pseudobulbs, bearing each a solitary elliptic leaf, which is leathery in texture, and from two to three inches

long. The scapes spring from the top of the pseudobulbs, and bear a single flower frequently measuring as much as three inches across; the oblong-lanceolate sepals and the broadly-ovate petals are of a bright cinnabar or deep crimson-scarlet.

Sophronitis grandiflora is of easy culture, and should be grown in the cool house, either on a block of wood or in a basket suspended from the roof in a compost of peat and sphagnum moss. It delights in a liberal supply of water during the growing season, but care should be taken not to overdo this, more especially when the plants are showing flower, as they are apt to rot if over-watered. The plants should be propagated by dividing them just as they are starting to grow.

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CATTLEYA GIGAS FRANCONVILLENSIS

CATTLEYA GIGAS FRANCONVILLENSIS.

[Plate 505.]

Native of U.S. Colombia.

Epiphytal. *Pseudobulbs* short, fusiform, coarsely ribbed, invested with a light greyish sheath, monophyllous. *Leaves* lanceolate-oblong, obtuse, deep green, about nine inches long, two inches broad. *Scapes* two or more flowered, springing from the top of the pseudobulbs. *Flowers* large and handsome, exceeding six inches in diameter; *sepals* oblong-lanceolate, acute, slightly undulate at the edges, pure white; *petals* ovate, edges more or less undulate, pure white; *lip* very strikingly bold and handsome, the front lobe suffused with a rich deep magenta-purple, the intense purple veins encroaching on the pure white undulated margin. In the throat the white ground colour is visible through the pigment in the form of radiating veins. The two eye-like blotches on each side of the throat, so peculiar to this species, are of a straw yellow, which becomes paler towards the outside margins; lateral lobes folded over the column, bright rosy magenta exteriorly, slightly veined with a deeper shade, the reflexed portions of the inner surface suffused and veined with deep magenta-purple.

Cattleya gigas Franconvillensis, *H. Williams, Orchid Grower's Manual*, 7th ed., p. 164.

This most lovely Cattleya was first flowered in the rich collection belonging to the Duc de Massa, Chateau de Franconville, par Luzarches, France. It turned up quite accidentally out of an importation of *Cattleya gigas*, and we must congratulate the Duke as being the fortunate possessor of this unique novelty. Among the many forms of *C. gigas* we have seen several with light-coloured sepals and petals, but this is the first instance of one having flowered with pure white sepals and petals.

Cattleya gigas Franconvillensis in habit of growth is similar to the type. The flowers are large and of good form, measuring about six inches in diameter, sepals and petals pure white, lip fine in form, deep magenta-purple, with deeper veins and margined with white, the contrast of the rich-coloured lip against the white sepals and petals being most striking and beautiful. We have found *C. gigas* succeed best in a basket suspended from the roof, where a plentiful supply of sunshine is available, and air can readily be given. It should be grown in a compost of peat or polypodium fibre and sphagnum moss, with a few nodules of charcoal added. It requires an abundant supply of water during the growing season, and a long period of rest.

Royal Horticultural Society.—At the meeting held on March 12th in the Drill Hall, Westminster, some nice plants were exhibited, the most noteworthy of which will be mentioned here. One of the finest Cypripediums was, undoubtedly, *C. Sallierii Fittianum*, shown by Mr. Fitt, gardener to the Earl Cowper, Panshanger, Hertford, the petals and pouch being of a delicate shade of yellow, the former faintly veined with brown, while the dorsal sepal is greenish yellow at the base, with a pure white border and many dark purple spots; a very handsome flower of large size. A fine *Odontoglossum crispum guttatum* was shown by D. M. Grimsdale, Esq., Kent Lodge, Uxbridge; this variety is one of the best amongst its numerous competitors for popular favour. Messrs. J. Veitch and Sons contributed several interesting things, amongst which may be mentioned some vigorous plants of *Cymbidium eburneo-Lowianum*, *Cypripedium ianthe*, *Dendrobium Edithiae*, a cross between *D. nobile nobilius* and *D. aureum*; *Dendrobium Cybele nobilius*, the result of crossing *D. nobile nobilius* with *D. Findlayanum*, producing large handsome flowers in the way of its first-named parent; *Cypripedium Germinyanum*, a bold and striking flower; *Laelio-Cattleya Myra*, which was produced by crossing *Cattleya Trianae* with the pollen of *Laelia flava*, the result being quite a distinct acquisition; the sepals and petals are intermediate in size between the parents, of a pale straw-yellow, the throat being a sulphur-yellow, slightly veined with crimson deep down. A very distinct and handsome variety of *Mesospinidium vulcanicum* was exhibited by C. T. Lucas, Esq., of Warnham Court, Horsham; the plant in question was labelled *Warnham Court variety*, and bore two strong spikes of well-coloured and large flowers. Sir Trevor Lawrence, Bart., as usual was well to the fore with some out-of-the-way things—*Epiphronitis Veitchii*, *Phajus Cooksonii*, *Cirrhopetalum picturatum*, *Spathoglottis Lobbii*, *Pleurothallis Roezlii*, *Eulophiella Elizabethae*, all being vigorous and well-grown examples, doing much credit to Mr. White's methods of cultivating them. A fine form of *Cypripedium Lawrebel* with broad, dark-coloured sepal, was prominent in this exhibit; mention should also be made of *Masdevallia Shuttryana*, the result of a cross between *M. Shuttleworthii* and *M. Harryana*, the flowers partaking of the characters of both its parents.

E. Ashworth, Esq., Harefield Hall, Wilmslow, staged amongst other showy Orchids a beautiful *Dendrobium splendidissimum grandiflorum*, a cross between *D. nobile* and *D. aureum*; and another variety of the same hybrid called *Leeanum*, while *C. Findlayanum album* bore the palm, being a fine substantial form, as well as a vigorous grower. Another well-grown specimen of this variety was exhibited by T. Craven, Esq., of Ashlea, Ashton-on-Mersey. A very dark-coloured form of *Odontoglossum mulus* was sent by D. de B. Crawshay, Esq., under the varietal name of *atratum*. Conspicuous among a goodly collection sent by Baron H. Schröder was a fine plant of *Odontoglossum crispum nobilius*, with its bold and richly marked large flowers. A fine and handsome form of *Cattleya Percivaliana magnifica*, with a deep maroon velvety disk fading to crimson-magenta outwards, and a dark orange throat, veined with deep magenta-purple, was sent by F. Hardy, Esq., Timperley. Messrs. H. Low and Co. had a miscellaneous collection, among which *Cypripedium William Lloyd* attracted attention.

(Continued under Plate 506.*)*

CYPRIPEDIUM COHICO - LAWRE.

CYPRIPEDIUM CONCO-LAWRE.

[Plate 506].

Garden Hybrid.

Terrestrial. Acaulescent. *Leaves* channelled, oblong, acute, six inches or more long, two inches wide, of a deep green, tessellated with greyish green. *Scapes* eight inches or more in height, usually two-flowered. *Flowers* bold and handsome, measuring about four and a half inches in diameter; *dorsal sepal* measures nearly two inches in breadth and two inches in height, of a delicate shade of rosy purple, veined and more or less reticulated with rich vinous purple, the apical portion delicately shaded with yellow, which colour extends down the middle almost to the base, where a faint tinge of green is scarcely visible, numerous minute purple dots covering the basal region; *petals* nearly two and a half inches long, nearly one inch broad, of a delicate yellow, passing into vinous rosy purple at the tips and margins, veined with the same shade of purple and covered by numerous small spots of a blackish purple, principally disposed in lines along or between the nerves; the basal part on the upper halves of a yellowish green. *Pouch* yellow, suffused and veined with rosy purple. *Staminode* large, yellowish green, suffused and margined with pale rosy purple.

Cypripedium Conco-Lawre, *Lawrence*, *Gardeners' Chronicle*, 3rd series, 1893. xiii., p. 206. *Journal of Horticulture*, 1893, xxvi., p. 193, f. 41. *Gardeners' Magazine*, 1893, p. 675. *Lindenia*, ix., t. 408. *Orchid Review*, 1894, ii., p. 337, fig. 33.

The name of hybrid Cypripediums is legion, and at the present time they are raised by many growers both at home and on the Continent of Europe, and again in the United States of America, in such large quantities, that a really good hybrid like our present subject is doubly welcome, the more so as it comes from two good parents—*Cypripedium concolor*, figured under plate 302, in the seventh volume of this work, and *C. Lawrenceanum*, figured under plate 22 in the first volume. This handsome hybrid was raised by Sir T. Lawrence, Bart., at Burford Lodge, Dorking. The leaves most resemble those of *C. Lawrenceanum*, and the plant has the slow-growing propensity of *C. concolor*. Cypripediums are well grown at Burford Lodge, Dorking, Sir Trevor Lawrence's country seat, and many are the hybrids that Sir Trevor has had the good fortune to raise, not only in Cypripedes but in Dendrobes, a large series of good free-flowering sorts having been gained, some of which we hope to figure at a future time.

Cypripedium Conco-Lawre has flowers of a very attractive appearance, the dorsal sepal measuring two inches across; the colour is of a delicate shade of rosy purple. veined and reticulated with rich vinous purple, and delicately shaded with

yellow; the petals are about two and a half inches long by an inch broad, of a delicate yellow, passing into vinous purple at the tips and margins, and covered with numerous small spots of blackish purple. The pouch is yellow, suffused and veined with rosy purple; scape sometimes two-flowered. For cultivation it requires the same treatment as most of the plants belonging to the warm section, and should be grown in the East Indian house.

(Concluded from under Plate 505.*)*

Three well-grown and vigorous specimens of *Eulophiella Elizabethae*, contributed by Mr. Hamilton, gardener to H. Bass, Esq., Berkeley, Burton-on-Trent, demonstrated that under judicious treatment these plants will make ample return for the care bestowed upon them. Messrs. Cypher and Co., Cheltenham, staged a nice group of plants, one of which, *i.e.*, *Dendrobium Apollo*, was the sensation of the show; this plant is the result of a cross between *D. nobile pulchellum* and *D. splendidissimum grandiflorum*, the flowers being deeply coloured and of good substance. On a large specimen of *Platyclinis glumaceum*, shown by Sir F. Wigan, of East Sheen, we counted over sixty spikes of flowers, the whole forming a most charming effect. C. L. Ingram, Esq., of Godalming, had an interesting *Cypripedium refulgens*, the result of a cross between *C. Curtisii* and *C. hirsutissimum*, the pouch reminding one of the former, and the petals and sepal of the latter parent. A showy group was sent in by Messrs. B. S. Williams and Son, conspicuous amongst which were several well-grown examples of the beautiful and rare *Coelogyne cristata alba*, which with its masses of pure white flowers made a fine display. Worthy of note, too, were *Cypripedium Boxallii atratum*, *Cypripedium Measuresianum*, the free-flowering form of *C. Morganiae*, *C. Williamsianum*, *C. Chamberlainianum*, and *Lycaste fulvescens*. A spike of a very dark and handsome form of *Dendrobium nobile nobilius* was shown by Thos. Statter, Esq., Stand Hall, Whitefield. Messrs. F. Sander and Co., St. Albans, contributed among many others, *Cattleya albanensis superba*, very handsome; *Cypripedium Fowlerianum*, *C. miniatum*, a handsome cross between *C. Curtisii* and *C. insigne*; *Phajus Marthae*, a cross between *P. Blumei* and *P. tuberculosus*, a dark form of the curious *Masdevallia melanoxantha*, an old species lost sight of in gardens; lastly *Cattleya Trianae virginalis*, very chaste and beautiful.

SCHOMBURGKIA HUMBOLDTII.

SCHOMBURGKIA HUMBOLDTI.

[Plate 507.]

Native of Venezuela.

Epiphytal. *Pseudobulbs* oblong-pyriform or cylindraceous, invested with a greyish sheath, ribbed, two or three-leaved, four and a-half to five inches long. *Leaves* coriaceous, oblong, acute, deep green, four to five inches in length, one and a-half in breadth, *Scape* produced from the top of the pseudo-bulbs, upwards of two feet in height, many-flowered. *Flowers* three inches across; *peduncles* two inches long, rosy purple; *sepals* lanceolate-acute, slightly undulate, white or pale purplish rose, streaked with rosy purple, apex yellowish green; *petals* obovate, pale purplish rose, streaked and feathered radially with bright rose; *lip* four-lobed, the front lobes spreading, bright purple-magenta, veined regularly with deep magenta-purple, and bordered with a narrow white undulate serrate margin; side lobes folded over the column, rosy purple, veined with deep magenta-purple towards the margin; disk chrome-yellow veined with rosy purple.

Schomburgkia Humboldti, *H. G. Reichenbach fil*, *Xenia Orchidacea*, i., p. 240. *Veitch's Manual of Orchidaceous Plants*, ii., p. 101. *Williams' Orchid Grower's Manual*, 7th ed., p. 707.

Epidendrum Humboldti, *H. G. Reichenbach fil*, *Linnaea*, 1848, xxii., p. 836. *Bonplandia*, ii., p. 19. *Xenia Orchidacea*, i., t. 52.

Bletia Humboldti, *H. G. Reichenbach*, *Walper's Annalen*, v., p. 430. *Xenia Orchidacea*, ii., p. 58.

The present subject belongs to a genus which we regret to say is much neglected by Orchid growers, although there are some beautiful species which have been known to cultivators for many years. Doubtless this fact may be attributed to their shy-flowering qualities and the few specimens that are imported. Two of the best species, *Schomburgkia tibicinis* and *S. undulatus*, are figured under plate 205, vol. v., and plate 335, vol. vii., of this work. There is another very beautiful one, *S. Lyonsii*, with white flowers, spotted and barred with purple, of which there is a good figure in the *Botanical Magazine*. There are in all about a dozen species known to science, and certainly they may be classed as among our handsome Orchids, producing as they do large, many-flowered spikes of showy flowers. Botanically speaking, Schomburgkia comes very near to Laelia and Sophronitis. The genus was named in honour of Dr. Richard Schomburgk, a distinguished botanist who travelled in British Guiana in the forties with his brother, Sir Robert Schomburgk, who was for many years Director of the Botanic Gardens at Adelaide, South Australia.

Schomburgkia Humboldti is a very desirable and handsome plant, having pseudobulbs oblong pyriform in shape, tapering upwards, which are furnished with two to three leaves at the apex. The flower spikes are three to four feet long, producing a large, many-flowered cluster at the apex, the individual flowers being about three inches in diameter; sepals and petals pale rosy purple, lip magenta-purple, and throat orange. It was first discovered by Humboldt and Bonpland in the neighbourhood of Puerto Cabello, Venezuela, and only one or two instances are known of its having flowered in this country. Our plate was taken from a specimen which flowered in the collection of the Duc de Massa, Chateau de Franconville, par Luzarches, France, and to whom we are indebted for the opportunity of figuring this great rarity. It produces its flowers during the month of June. Schomburgkias should be grown either in baskets or on blocks or rafts. They should be placed as near the glass as possible. and have a plentiful supply of sunshine during the growing season. A plentiful supply of water should be given, withholding it gradually as the plants go to rest. For compost they should have rough fibrous peat and sphagnum moss, with good drainage; a few lumps of charcoal may with benefit be added. They should be grown in the Cattleya house.

CYPRIPEDIUM CHARLESWORTHII.

CYPRIPEDIUM CHARLESWORTHII.

[Plate 508].

Native of the East Indies.

Terrestrial. Acaulescent, tufted. *Leaves* distichous, oblong-lanceolate, acute, six to seven inches in length, about one inch broad, deep green, lower surface streaked and spotted with purple-brown as far as or beyond the middle. *Scapes* short, one-flowered. *Sheaths* pale green, beautifully spotted with purplish brown. *Flowers* three and a half inches across the longest diameter, *i.e.*, from tip of dorsal to tip of anterior sepal; *dorsal sepal* broadly obovate, very large, measuring two inches in height, and over two inches in width, of a beautiful rosy purple marbled with white at the apex and lower margins, veined and tessellated with a deeper hue of rosy purple, which becomes intenser towards the base; *anterior sepal* greenish yellow on the inner surface, faintly veined longitudinally, the outer surface veined with rosy purple; *petals* obovate-lanceolate, yellowish green, covered with purple-brown veins, which anastomose towards the apex; *lip* very small compared with the other parts, bronzy yellow, wide at the aperture, with an acute sinus in the anterior margin. *Staminode* very striking, porcelain-white, with a yellowish protuberance.

Cypripedium Charlesworthii, *Rolfe, Orchid Review*, 1893, i., p. 303. *Journal of Horticulture*, 1893, xxvii., p. 307, fig. 43. *Gardeners' Chronicle*, 3rd series, 1893, xiv., p. 437, fig, 70. *Orchid Review*, 1893, i., p. 355, with plate (frontispiece). *Gardeners' Magazine*, 1893, p. 750, with woodcut. *Williams' Orchid Grower's Manual*, 7th ed., p. 244. *Lindenia*, x., t. 443. *Gartenflora*, 1895, t. 1410.

No new Cypripedium has caused such a sensation since the introduction of *C. Spicerianum*, when a plant was sold for 100 guineas in Stevens' Auction Rooms. Our present subject cannot, however, claim to be a high-priced plant, as so large have the importations been of it, that good plants can now be purchased for a few shillings each. It was first introduced in 1893 by Messrs. Charlesworth and Co., of Bradford, and was by them exhibited before the Orchid Committee of the Royal Horticultural Society in September of the same year, when it was deservedly awarded a First Class Certificate. In habit of growth it resembles *C. Spicerianum*. The dorsal sepal is of great size, and being of such a lively rose colour should be of great service to the hybridizer.

Cypripedium Charlesworthii is of compact tufted habit, with deep green leaves, having the under surface marked with purple. The individual flowers are about three and a half inches in diameter, and the great beauty of the flowers lies in the dorsal sepal, which is broadly obovate, about two inches across, of a beautiful rosy purple colour, white towards the apex. It flowers during the autumn months, and continues in perfection for a long period. There is no doubt a great future

before this plant, as the flowers being of such a pleasing colour they will be much sought after for cutting and decorative purposes. This plant should be grown in the East Indian house, in a compost of rough fibrous peat and sphagnum moss. A few lumps of old mortar or limestone will also be beneficial to it, as the roots are very partial to these materials, and like to roam amongst them. The pots should be well drained, and the roots kept well moistened during the growing season.

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COCHLIODA NOEZLIANA.

[Plate 509.]

Native of South America, Peru (?).

Epiphytal. *Pseudobulbs* compressed, ovate-oblong, one and a half to two inches high, one or two-leaved. *Leaves* linear-lanceolate, acute, deep green, five to six inches long. *Scapes* arcuate-racemose, many-flowered, about one foot in length. *Flowers* about an inch in diameter, rich orange-scarlet; *sepals* oblong-linear, acute, the dorsal one broader than the lateral ones; *petals* ovate, acute; *lip* trifid, of same colour as sepals and petals, mid lobe obcordate, disk crested, golden yellow. *Column* violet-purple.

Cochlioda Noezliana, *Rolfe, Lindenia*, vi., t. 266. *L'Orchidophile*, 1892, p. 272 (with plate). *Revue Horticole Belge*, 1892, p. 49, t. 5. *Gartenflora*, 1894, p. 281, t. 1403. *Gardeners' Chronicle*, 3rd series, 1894, xvi., p. 71, f. 11. *Veitch's Manual of Orchidaceous Plants*, part ix., p. 187. *Williams' Orchid Grower's Manual*, 7th edition, p. 199. *Lucien Linden, Les Orchidées Exotiques*, p. 158, fig. 25.

Odontoglossum Noezlianum, *Hort. Linden, Gardeners' Chronicle*, 3rd series, 1890, viii., p. 602. *Journal des Orchidées*, i., p. 294.

This small genus is closely allied to Odontoglossum and the old Mesospinidium, which is now merged with it. The plants belonging to it are evergreen, and require cool treatment; they are natives of the Peruvian Andes. *Cochlioda Noezliana* is a very handsome and distinct novelty, and was introduced in 1891 by Messrs. Linden, of Brussels, through Mr. John Noezli, after whom it is named. It is a most welcome addition to our cool Orchids, being most distinct in colour; moreover, the rich orange-scarlet tint of its flowers is one that is very little represented in the Orchid family. In habit of growth it closely resembles *C. vulcanica*, having ovate-oblong compressed pseudobulbs, and long narrow leaves. The scapes are produced from the base of the completed bulb, and are pendulous, many-flowered, in some instances branched. The flowers are about an inch in diameter, and of a soft brilliant orange-scarlet; the lip is trifid, of the same colour as the sepals and petals, with a golden yellow disk. The column is bright violet-purple, which produces a striking contrast with the scarlet of the remainder of the flower. The flowering period is May and June, and for this reason it should be found valuable as a summer exhibition Orchid. The flower is of long lasting quality, and we have been able to use the same plant at several exhibitions.

We have found it succeed best grown in baskets, in a compost of peat and sphagnum moss with good drainage. During the growing season it should receive a liberal supply of water. Propagation is effected by dividing the pseudobulbs.

The Temple Show.—This exhibition, the eighth of its kind, held on May 21st, 22nd, and 23rd, 1895, was a great success as far as the number and quality of the exhibits were concerned though in the matter of novelties it did not attain the standard to which we have of late been accustomed.

As usual, Baron Schröder and Sir Trevor Lawrence, Bart, were the leading amateur exhibitors. It is impossible to give our readers a full report of the many good things sent in, and we are therefore compelled to confine ourselves to noting the most meritorious specimens and salient features of the show. Among Baron Schröder's large and well-selected group, which was deservedly awarded a Silver Cup, we noted two beautiful varieties of *Odontoglossum crispum*, one called *apiatum*, which appears to be one of the largest and finest varieties it is possible to find, and the other labelled *Sanderianum*, very beautiful and richly coloured; besides such better known but still desirable varieties as *xanthotis* and *punctatissimum*; further, *O. Pescatorei leucoxanthum* and the rare *O. marginellum*. A striking object was *Cattleya Skinneri*, with ten spikes of flowers, contrasting nobly with *C. Skinnerii alba* with five spikes. Many handsome varieties of *C. Mendelii*, *C. Mossiae*, and *Laelia purpurata* made a fine display, foremost among which came *Cattleya Mendelii Dellensis* with a First Class Certificate. *Masdevallia Benedicti*, with not less than three hundred blooms; the rare *Cypripedium Hyeanum*, a beautiful form of *C. Mastersianum*, *Laelio-Cattleya Hippolyta*, *L-C. Schilleriana*, and a host of other well-grown specimens too numerous to mention constituted a tasteful and magnificent group, in the arrangement and condition of which Mr. Ballantine, Baron Schröder's able gardener, displayed considerable ability. Sir Trevor Lawrence, Bart., staged a choice and well-selected group, containing not only several showy and rare specimens, but likewise several plants of botanical interest, which are much neglected by most Orchid growers. The most valuable and interesting in the whole group was undoubtedly a fine and well-grown specimen of the rare and beautiful *Cypripedium Stonei platytaenium*, which received a well-merited Silver Flora Medal and a First Class Certificate. Other plants which received special awards were *Masdevallia Harryana* and *M. Shuttryana*, each of which received an Award of Merit; and *Epidendrum Stamfordianum*, to which another Silver Flora Medal was awarded. Amongst other interesting things we may mention the rare variety *concolor* of *Cymbidium Lowianum*, a fine *Laelia majalis*, *Cattleya Wagenerii*, *Laelio-Cattleya Phoebe*, *Vanda Denisoniana*, *Oncidium Marshallianum* and *O. varicosum*, several fine varieties of *Laelia purpurata*, *Masdevallia Courtauldiana*, *M. Estradae*, a beautiful specimen of the rare *M. Wendlandiana*, *Cypripedium Lawrebel* and *C. conco-Lawre.* The many healthy and well-grown specimens in this group bear ample testimony to the skill and ability of Mr. White, Sir Trevor's indefatigable Orchid grower. W. S. Ellis, Esq., Hazelbourne, Dorking, contributed several good forms of *Odontoglossum*

(*Continued under Plate* 510).

ONCIDIUM SPILOPTERUM.

[Plate 510.]

Native of Brazil.

Epiphytal. *Pseudobulbs* ovate-conical, ribbed, one and a half inches high. *Leaves* linear-lanceolate, acute, six to eight inches long, light green. *Scape* racemose, produced from the base of the pseudobulbs, about fifteen inches high, bearing six or more flowers; *pedicels* nearly an inch long. *Sepals* and *petals* sub-equal, small, acuminate incurved, greenish outside, brownish purple inside; *lip* three-lobed, front lobe obreniform, three-quarters of an inch wide, half an inch high, of a beautiful pale yellow, edge slightly undulate; side lobes very small spathulate; *crest* spiny, rosy purple, the tip of the spines deep purple. *Column* greenish yellow, with two small trapeziform wings.

Oncidium spilopterum, *Lindley*, *Botanical Register*, 1844, *miscellaneous matter*, No. 76; *Id.* 1845, t. 40.

Oncidium Batemannianum spilopterum, *Lindley*, *Folia Orchidacea*, Article *Oncidium*, No. 185.

Oncidium gallopavinum, *Morren*, *Annales de Gand*, i., p. 13.

The present subject is by some authorities considered to be simply a variety of *Oncidium Batemannianum*, while others believe it sufficiently distinct to give it specific rank; Lindley himself appears to have wavered in his opinion, for when first publishing it he believed it to be a good species, while later he so far modified his views as to state his conviction that it was one of many forms of but one type, and consequently he united *O. Batemannianum*, *O. spilopterum*, *O. gallopavinum*, *O. ramosum*, *O. Pinellianum*, with perhaps *O. caldense* into one polymorphous species. We would not hesitate to adopt the later views of so acute an observer as Lindley, but the fact must not be overlooked that he had but a limited amount of material at his disposal, while the wealth of specimens that find their way to our great national Herbaria allows of wider generalizations than were possible in his days. These considerations have induced us to follow the Kew authorities in separating *O. spilopterum* from its near allies, although, as no hard and fast line can be drawn as to what constitutes a species and what a variety, it must, to a great extent, always remain a matter of individual opinion. *O. spilopterum* belongs to the section *verruci-tuberculata*, and is closely allied to *O. varicosum*. It is a somewhat variable species, growing about eighteen inches high, with oblong-compressed pseudobulbs and narrow pale green leaves. The flowers, which are very attractive, are produced in erect racemes from the base of

the mature bulb. The sepals and petals are brownish purple, while the lip is bright yellow with purple crests. The subject of our plate was flowered by Mr. Clark, gardener to Ludwig Mond, Esq., The Poplars, Avenue Road, Regent's Park, where there is a choice collection of Orchids, which are well cultivated by the able gardener, and to whom we are indebted for the following information as to cultivation. To succeed well it should be grown in a compost of peat and sphagnum in a pan, with a liberal admixture of charcoal. The intermediate house suits it best, where it should be suspended near the glass, which must, however, be shaded from bright sunshine. It does not require a long resting period, as the leaves and pseudo-bulbs are apt to suffer.

(*Continued from Plate* 510).

crispum, besides many other good Odontoglots, *Cattleya Mossiae*, *C. Warscewiczii*, *Oncidium Kramerianum*, *Cochlioda Noetzliana*, for which a Silver-Gilt Knightian Medal was awarded. Earl Percy, Sion House, Brentford, received a Silver Flora Medal for a group containing several Odontoglossums, *Cattleya Mossiae*, *C. citrina*, *Vanda suavis*, and *Cymbidium Lowianum*.

Mr. Jules Hye, of Ghent, staged a small group, which, however, was conspicuous by being composed of choice rare specimens only, including a very intensely coloured variety of *Cattleya Lawrenceana*, called *atro-rubens* (Award of Merit), a beautiful and chaste *Miltonia Bleui virginalis* (First Class Certificate), a handsome specimen of *Laelio-Cattleya Hippolyta* with a large spike of eight flowers (Cultural Commendation); *Cypripedium Hyeanum*, and *Miltonia vexillaria gigantea*.

Messrs. F. Sander & Co. contributed a large and showy group for which they received a Silver Cup. We merely mention a few. Some fine varieties of *Cattleya Mossiae*, *C. Mendelii*, and *Laelia purpurata*, conspicuous among which was *Cattleya Mossiae Prince of Wales*, receiving an Award of Merit. *Phajus Sanderianus*, *Oncidium phymatochilum*, *O. altissimum*, *O. pulchellum*, a fine variety of *Sobralia Veitchii*, several species of *Microstylis*, *Laelia Digbyana*, *L. grandis* and its variety *tenebrosa*, *Cattleya dolosa* and *C. Mendelii Sanderae*.

Sir Frederick Wigan, Clare Lawn, East Sheen, whose Orchids are under the able charge of Mr. Young, sent *Cypripedium Rothschildianum* with three spikes, many fine Cattleyas, the best of which was *C. Mossiae Lady Wigan* (Award of Merit), *C. Schilleriana*, *Disa Langleyensis*, *Vanda suavis*, *Masdevallia Ephippium*, and some other good plants, well meriting the Silver Cup awarded. A Silver-Gilt Flora Medal was given to J. Gurney Fowler, Esq., Glebelands, Woodford, for a group which well attested the ability of his gardener, Mr. Davis. We noted especially an extra fine specimen of *Epidendrum Wallisii* with eight growths bearing spikes (Cultural Commendation); then *Cypripedium Hyeanum*, *C. Schröderae*, *C. bellatulum*, *Oncidium Lanceanum*, *Masdevallia triaristella*, and *M. Schlimii*.

(*Continued under Plate* 511).

MAXILLARIA NIGRESCENS.

[Plate 511.]

Native of New Grenada.

Epiphytal. *Pseudobulbs* ovoid, compressed, about two inches high, monophyllous. *Leaves* leathery, bright green, oblong-ligulate, acute, conduplicate at the base, about one foot in length and one and a half inches in breadth. *Peduncles* erect, slightly inclined at the top, one-flowered, three to four inches long, invested by scaly sheaths. *Sepals* spreading, ovate-lanceolate, acute, two and a half inches long, of a port-wine colour, the tips dull golden yellow; *petals* similar but of a deeper hue at the base; *lip* blackish purple, three-lobed, margins incurved, apex reflexed yellow.

Maxillaria nigrescens, *Lindley, Orchidaceae Lindenianae*, p. 20. *H. G. Reichenbach fil., Walper's Annalen*, vi., p. 518.

Maxillaria rubrofusca, *Klotsch, Ind. Sem. Hort. Berol.*

The genus Maxillaria, although a very old one, appears to be much neglected by Orchid growers, very few of the species being generally cultivated, yet many are really attractive and well repay any care bestowed upon them by abundant crops of flowers which, if not as gaudy and bright as many other Orchids, are often quaint and fantastic, and thereby contribute to give variety, in form as well as colour, to a collection. We do not hesitate to assert that even some species yield to few in attractive bright colours, as for instance *M. Sanderiana* figured in vol. x. of this work, plate 463, and *M. venusta*, also figured in this work on plate 492 of the ninth volume. *Maxillaria nigrescens* was discovered in 1842 on the Cordilleras of Merida, in the United States of Colombia, by Mr. J. Linden. It is a very curious and attractive species, with ovate compressed pseudo-bulbs, which bear solitary oblong-ligulate dark green leaves, the flowers being produced singly in great profusion from the base of the bulbs on erect spikes. The flowers are large, about 5 inches across, the sepals and petals of a deep port-wine colour, softening off to brownish yellow at the tips; the lip is stained with dull purple. Our present subject was taken from a plant which flowered in the Victoria and Paradise Nurseries during the months of October and November. It is very useful for cutting purposes, producing as it does such a profusion of flowers. This species should be grown in the cool house in a compost of good fibrous peat with a little sphagnum moss added, and it should receive a liberal supply of water while growing. The plants should be shaded from the direct rays of the

sun, and be placed as near the glass as possible. Propagation is effected by division of the pseudobulbs. An ample supply of air should be given and good drainage.

(*Continued from Plate* 510).

Messrs. B. S. Williams & Son, Upper Holloway, were well to the fore with good and showy varieties of *Cattleya Mendelii, C. Mossiae, Laelia purpurata* and its handsome variety *Russelliana*; while large quantities of *Vanda teres* and *Oncidium Marshallianum* imparted a gay and attractive appearance to this group. Of especial note and merit were *Oncidium sarcodes* with its numerous spikes of bright handsome flowers, *O. concolor, O. Lietzei*, the rare *Pescatorea Klabochorum, Trichopilia coccinea, Odontoglossum Harryanum, Cypripedium exul, C. Schröderae, Cochlioda Noetzliana, Maxillaria Sanderiana atropurpurea* (a very rich form), and a host of others. A Silver-Gilt Flora Medal was awarded for this fine and massive group, while *Brassia Keiliana tristis* and *Vanda concolor* received each a Botanical Certificate.

M. Wells, Esq., Broomfield House, Sale, exhibited, amongst some other good Orchids, a fine variety of *Cattleya Mossiae* and a hybrid between *C. Mendelii* and *Laelio-Cattleya exoniensis.* Thomas Statter, Esq., Stand Hall, Whitefield, Manchester, sent a fine specimen of *Odontoglossum Wilckeanum* bearing a magnificent spike of about forty flowers, while F. Hardy, Esq., Tyntesfield, Ashton-on-Mersey, exhibited the beautiful *Sobralia macrantha alba.* H. Shaw, Esq., Ashton-under-Lyne, staged *Cypripedium Victoria-Mariae* and a fine example of *Laelio-Cattleya elegans*, bearing a large spike with nine flowers. T. McMeeking, Esq., Falkland Park, South Norwood (Mr. Wright, gardener), sent a beautiful specimen of *Dendrobium Dalhousieanum.* Malcolm S. Cooke, Esq., Kingston Hill, was awarded a Silver Flora Medal for a nice group, conspicuous in which were *Laelia grandis tenebrosa, Odontoglossum nebulosum, O. Lindleyanum, O. Coradinei*, and several Cattleyas. Norman C. Cookson, Esq., Oakwood, Wylam-on-Tyne, exhibited a fine hybrid, *Cattleya William Murray* and De Barri Crawshay, Esq., Sevenoaks, sent a charming variety of *Odontoglossum crispum* called *Florrie.* Mr. Vuylsteke, Loochristi Ghent, sent a good form of *Odontoglossum Pescatorei* named *La perfecta* which received an Award of Merit, also *O. luteo-purpureum sceptrum, O. triumphans, O. Wilckeanum.*

Messrs. Hugh Low & Co., Clapton, staged a number of *Cattleya Mossiae*, containing many fine forms, noteworthy being the variety *Reineckiana*; *C. Mendelii*, in many forms, one of which, *grandis*, received an Award of Merit; *Laelia purpurata*, in many forms also, among which we noted the beautiful variety *Enfieldensis*, with very large lip; *Cattleya Schilleriana, Cypripedium hirsutissimum. C. caudatum, C. Lowii, C. niveum, C. Gertrude Hollington.* Further, *Dendrobium*

(*Continued under Plate* 512).

ONCIDIUM ORNITHORHYNCHUM ALBIFLORUM.

[Plate 512.]

Native of Guatemala.

Epiphytal. *Pseudobulbs* ovate or ovate-oblong, one to one and a half inches high, diphyllous. *Leaves* imbricating, several at the base of the pseudobulbs, linear-lanceolate, acute, ribbed, deep green, eight to ten inches long. *Scapes* produced from the axils of the basal leaves, many-flowered, panicled, arching, a foot or more in length. *Flowers* one inch across the vertical diameter, white; *sepals* and *petals* oblong linear, petals slightly waved at the edges, lateral sepals divaricate; *lip* sub-pandurate, with bi-lobed apex, margins of lateral lobes reflexed; *crest* consisting of five yellow toothed lamellae.

Oncidium ornithorhynchum, *Humboldt, Bonpland and Kunth, Nova Genera et Species Plantarum*, i. t. 80. *Lindley, Genera and Species of Orchidaceous Plants*, p. 204. *Botanical Register*, 1840, t. 10. *Folia Orchidacea* Article *Oncidium*, No. 189. *Bateman, The Orchidaceae of Mexico and Guatemala*, t. 4. *Botanical Magazine*, t. 3912. *Knowles and Westcott, Floral Cabinet*, iii, t. 136. *L'Orchidophile*, 1885, p. 102 (with plate). *Veitch's Manual of Orchidaceous Plants*, Part viii., p. 66. *Williams' Orchid Grower's Manual*, 7th edition, p. 625.

Oncidium ornithorhynchum albiflorum, *H. G. Reichenbach, Gardeners' Chronicle*, 1873, p. 503. *Floral Magazine*, new series, t. 398. *L'Orchidophile*, 1885, p. 102 (with plate). *Gardeners' Chronicle*, 3rd series, 1894, xvi., p. 781, f. 102. *Gardeners' Magazine*, 1895, p. 18 (with figure). *Veitch's Manual of Orchidaceous Plants*, Part viii., p. 66. *Williams' Orchid Grower's Manual*, 7th edition, p. 625.

Oncidium ornithorhynchum album, *Journal of Horticulture*, 1894, xxix., p. 399, f. 62.

Our present subject is an "albino" of a very old favourite known to gardens for many years past, and one that is much esteemed by cultivators, more especially on account of its beautiful drooping spikes of flowers which emit a delicious perfume. There are two varieties of the type, one having darker and larger flowers.

Oncidium ornithorhynchum albiflorum was first flowered by the late John Day, Esq., of Tottenham, a most enthusiastic Orchid grower, and whose collection was one of the largest and most complete ever brought together in this country, but unfortunately was dispersed some few years ago on the death of its owner. This variety is in the habit of its growth similar to the type, and is quite as floriferous as the species, its beautiful white flowers being produced in some cases several together from the base of the leaves, and are pure white saving the yellow

calli at the base of the lip. It is a very useful subject for cutting purposes, and on that account should be eagerly sought after by collectors. It should be grown in a compost of peat and sphagnum moss in a basket, and placed in the Cattleya house at the shady end, a liberal supply of moisture being required during the growing season, and afterwards only just sufficient water should be given to keep the pseudobulbs from shrivelling. This plant may also be grown in the cool house, but we prefer the Cattleya house, having found that it does better there. It is propagated by division of the pseudobulbs. The flowers are produced during the summer months, and last a considerable time in perfection.

(*Concluded from Plate* 511).

crassinodi-Wardianum, *Lycaste cruenta*, *Odontoglossum tentaculatum*, *O. Wilckeanum*, *Lowii* (Award of Merit), *Vanda Bensoni*, and many other good things, made altogether a very fine display. The group received a Silver Cup.

Messrs. Charlesworth & Co. received a Silver-Gilt Flora Medal for a showy group, consisting of many *Laelia purpurata*, *Oncidium macranthum*, *Dendrobium Hildebrandti*, *D. thyrsiflorum*, *Oncidium Marshallianum*, *O. concolor*, *Odontoglossum ramosissimum*, *O. Hallii*, *O. cirrhosum*, *Laelia Wyattiana*, *Cypripedium Rothschildianum*, *C. bellatulum*, and *Maxillaria Sanderiana*.

Mr. James Cypher, Cheltenham, contributed a large and effective group, for which he received a Silver-Gilt Flora Medal. The chief points of interest were *Laelia purpurata*, of several good forms, three of which attracted attention—*i.e.*, the varieties *Othello*, *Duchess*, and *Princess*. The following are some of the more conspicuous plants among many in this group:—fine *Sophronitis grandiflora*, *Dendrobium rhodostoma*, *D. moschatum*, *D. Bensoniae*, *D. Dearei*, *D. Falconeri*, *D. suavissimum*, *D. Phalaenopsis Schröderii*, *Epidendrum O'Brienianum*, *Cypripedium grande atratum*, and *Oncidium cucullatum*.

Messrs. Lewis & Co., Southgate, contributed many good Laelias and Cattleyas. besides such noteworthy plants as *Cypripedium Druryi*, *C. niveum*, *Chysis bractescens*, *Promenaea citrina*, *Lycaste Deppei*, *Oncidium pulvinatum*, *O. ampliatum majus*, and *O. cornigerum*, for which a Silver-Gilt Medal was awarded.

The hardy Cypripediums were represented by *C. Calceolus*, *C. arietinum*, *C. pubescens*, *C. montanum*, and *C. acaule*, in a group contributed by Mr. T. S. Ware, Tottenham.

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Homerus, deep rose
Rubra maxima, deep rose
Grand Lilas, light blue
General Lauriston, deep blue

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—— —— —— rose	6	0	1	0
—— —— —— scarlet ...	3	0	0	6
—— —— —— white ...	10	6	1	6
—— —— —— yellow ...	10	6	1	6
L'Immaculee, white	4	0	0	8
Le Matelas, rose	45	0	5	6
Pottebakker, white	8	6	1	3
Proserpine, deep rose ...	10	6	1	6
Vermilion Brilliant, vermilion	15	0	2	0

EARLY DOUBLE TULIPS.

	Per 100. s.	d.	Per doz. s.	d.
Duc Van Thol, red and yellow	3	0	0	6
Imperator rubrorum, crimson-scarlet	12	6	1	9
Murillo, rosy white	10	6	1	6
Tournesol, red and yellow ...	8	0	1	3
—— yellow	17	6	2	6

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Double Roman	6	0	1	0
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—— **ornatus**	4	0	0	8

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Blue do. do. ...	—		13	6
Mixed, all colours	120	0	12	6

DOUBLE TULIPS.

Duc Van Thol	27	6	3	0
Red and Yellow	30	0	3	6
Scarlet	75	0	8	0
White	35	0	3	6
Mixed, all colours	22	6	2	6

SINGLE TULIPS.

Crimson	27	6	3	0
Red and Yellow	35	0	4	0
Rose	60	0	6	6
Scarlet	30	0	3	0
White	27	6	3	0
Yellow	60	0	6	6
Mixed, all colours	22	6	2	6

SCILLAS.

Campanulata, blue... ...	25	0	3	0
Siberica, bright blue, very early	25	0	3	0

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	Per 1000. s.	d.	Per 100. s.	d.
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Large Blue	12	6	1	6
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NARCISSUS.

Pheasant's Eye	15	0	2	0
Double White	30	0	3	6
Biflorus	17	6	2	0
Incomparabilis *(Butter and Eggs)*	30	0	3	6
Mixed Hardy Narcissus ...	21	0	2	6
Polyanthus Narcissus, mixed	45	0	5	0

	Per 1000. s.	d.	Per 100. s.	d.
Anemone, Double, finest mixed	35	0	4	0
—— —— **scarlet**	50	0	5	6
—— **Single** ,, ...	22	6	2	6
—— —— **mixed**	18	0	2	0
Chionodoxa Luciliae ..	30	0	3	6
Fritillaria meleagris, mixed	45	0	5	0
Gladioli, mixed, early-flowering	35	0	3	6
—— **Colvilli albus**	—		3	0
Grape Hyacinths	20	0	2	6
Hyacinthus candicans ...	—		7	6
Iris, English, finest mixed...	45	0	5	0
—— **Spanish** ,, ...	12	6	1	6
—— **German** ,, ...	—		10	6
Ixia crateroides	40	0	4	0
Montbretia crocosmiæflora	—		6	6
—— **Pottsii**	—		5	6
Ranunculus, mixed Persian	20	0	2	6
Spring Snowflake	45	0	5	6
Star of Bethlehem	20	0	2	6
Triteleia uniflora	21	0	2	6
Winter Aconites	15	0	2	0
Wood Hyacinths (*Blue Bells*)	14	0	1	6
Orange Lily (*L. croceum*) ...	—		27	6
Tiger Lily (*L. tigrinum*) ...	—		10	6
White Garden Lily (*L. candidum*)	140	0	15	0

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RENANTHERA STORIEI

RENANTHERA STORIEI.

[Plate 513.]

Native of the Philippine Islands.

Epiphytal. *Stems* stout, ascending, ten to twelve feet high, furnished with alternate leaves which are elliptic-ovate or ovate-lanceolate, deep green, somewhat fleshy, unequally bluntly bi-lobed at the apex, from eight to ten inches long. *Scape* about twelve inches long, branched, many-flowered, nodding, produced opposite the leaves, peduncle stout, vinous red. *Flowers* about two and a-half inches across the vertical diameter; *lower sepals* sub-connate, broadly ovate, obtuse clavate, of a light crimson, spotted and barred transversely with rich deep velvety crimson; *dorsal sepal* and *petals* obovate-lanceolate, acute, bright orange spotted with crimson; *lip* small, three-lobed, provided beneath with a small conical spur, at the mouth of which are two quadrate lamellae; mid-lobe ligulate-acute, deep crimson, greenish yellow at the base; lateral lobes triangular, orange-yellow striped with deep crimson, margined with a darker shade of the same colour. *Column* terete, rich deep velvety crimson.

Renanthera Storiei, *H. G. Reichenbach, Gardeners' Chronicle,* new series, 1880, xiv., p. 296. *Williams' Orchid Grower's Manual,* 7th edition, p. 694.

Renanthera is a small genus closely allied to Vanda, containing but few species, mostly of scandent habit, found chiefly in tropical Asia and the Malay Archipelago. Our present subject is one of the handsomest plants belonging to this genus, growing to a height of twelve feet, and having distichous fleshy leaves eight to ten inches long. It has a large many-flowered branching inflorescence which carries from fifty to sixty flowers. The sepals and petals are dark orange, the lower sepals broad, brilliant velvet-crimson, shaded with a lighter tint of the same colour. The lip is small, deep crimson, with yellow bars and a white centre.

Renanthera Storiei flowered in September, 1894, in the Victoria and Paradise Nurseries, and was much admired by all who saw it, the handsome spike of orange-scarlet flowers standing out well among the other species of Vanda and other East Indian Orchids which were in flower at the same time. It is named in compliment to Mr. James G. Storie.

We have found this plant do best in a pot, as, being of stout erect habit and a tall grower, when suspended it soon reaches the glass. It should be potted in sphagnum moss with a good supply of drainage; it requires the temperature of the East India house, and an abundant supply of water during the growing season. This plant should have all the light attainable, but be shaded from the burning rays of the sun.

Royal Horticultural Society.—At the meeting held at the Drill Hall, Westminster, on November 26th, 1895, some interesting plants were exhibited, the most meritorious of which will be noticed here.

Sir Trevor Lawrence, Bart., sent a handsome hybrid *Cypripedium*, the result of a cross between *C. Stonei platytaenium* and *C. concolor*, labelled *C. platycolor*. The spike bore three flowers and one bud; the flowers are a beautiful creamy white suffused with rose, the sepals and petals being covered with minute purple dots. The influence of both parents can be distinctly traced, but that of *C. concolor* seems to predominate, although the flowers are larger than those of that parent. A Certificate of Merit was deservedly awarded to this exhibit.

A beautiful plant was staged by Thomas Statter, Esq., Stand Hall, Whitefield, Manchester of *Cattleya aurea Marantina*; the lip is deep rich purple reticulated with golden yellow, the sepals and petals of a yellow bronze, the latter marked with rose. It received an Award of Merit.

J. W. Temple, Esq., Leyswood, Groombridge, exhibited *Cattleya Miss Williams*, the result of a cross between *C. Harrisoniae* and *C. Gaskelliana*, the flowers being of a delicate lilac-rose shade, the lip blotched with magenta-crimson. Another hybrid *Cypripedium*, raised by Mr. C. Richman, gardener to G. L. Palmer, Esq., Springfield, Trowbridge, named *C. Madeline*, which was obtained by crossing *C. bellatulum* with *C. Argus*, received an Award of Merit; the flowers are yellowish white slightly suffused with lilac-rose, and spotted with rich purple. Mr. W. H. Young, gardener to Sir Frederick Wigan, Clare Lawn, East Sheen, showed *Laelio-Cattleya William Murray*, having beautiful large flat sepals and petals of a deep magenta, with a deep crimson lip.

Stanley Clark, Esq., Oak Alyn, Wrexham, contributed *Cattleya Trianae Mrs. Stanley Clark*, a handsome variety, the magenta petals being feathered with crimson, and the lip of a rich crimson-purple.

Meeting of December 10th.—The rare *Dendrobium Treacherianum* was exhibited by Sir Trevor Lawrence, Bart.; the plant bore three spikes containing twenty-three flowers which are a delicate purple-rose, the base of lip dark crimson-purple. A First Class Certificate was awarded, while the gardener, Mr. W. H. White, received a Cultural Commendation. The following were also contributed by Sir Trevor: *Angraecum pertusum*, *Masdevallia pachyura*, *Mormodes Lawrenceanum*, each of which was awarded a Botanical Certificate; a large variety of *Masdevallia macrura* (Award of Merit); *Dendrobium Coelogyne*, *Laelia rubescens* (better and more correctly known as *L. acuminata*) in two varieties, the type with white flowers and the variety known in gardens as *rosea*, with pale rose flowers, and *Bulbophyllum grandiflorum*.

Baron Sir J. H. W. Schröder staged a magnificent collection of cut *Cypripedium* flowers embracing over fifty species and varieties, and for which he received a Silver Banksian Medal.

J. T. Bennett-Poë, Esq., Holmewood, Cheshunt, exhibited a handsome variety of *Vanda coerulea* with rich blue flowers, *Lycaste Skinneri Holmewood variety* and

(*Continued under Plate* 514).

ANGRAECUM GRANDIFLORUM.

AËRANTHUS GRANDIFLORA.

[Plate 514.]

Native of Madagascar.

Epiphytal. *Stem* erect, producing several distichous, ligulate, bright green leaves, which are unequally bi-lobed at the apex, six to eight inches long. *Scapes* nodding, one-flowered; *peduncles* thin, eight or nine inches long, invested with brown sheathing scales. *Flowers* measure about five inches or more from tip to tip of petals; *sepals* ovate-lanceolate, acuminate, canaliculate, ivory-white tipped with straw-yellow; *petals* narrowly ovate-lanceolate acuminate, of the same colour as the sepals; *lip* ovate acuminate, slightly recurved at the base, ivory-white suffused with pale yellow and tipped with straw-yellow; *spur* short, arched, slightly inflated towards the apex, yellowish green.

Aëranthus grandiflora, *Lindley, Botanical Register*, t. 817. *Lindenia*, iii., t. 109. *Williams' Orchid Grower's Manual*, 7th ed., p. 79.

This rare species was first introduced from St. Mary's, Madagascar, in 1823, by the late Mr. Forbes, and was sent by him to the Gardens of the Horticultural Society, where it flowered in July, 1824; the figure in the *Botanical Register* was taken from that plant. There are only three species of Aëranthus known: our present subject, *Aëranthus arachnites*, and another form, *A. Leonis*, introduced by M. Leon Humblot, from the Comoro Islands, and figured by us in this work in the fifth volume on plate 213. Doubt has been thrown upon the correctness of Reichenbach's view in referring this last species to Aëranthus, the difference in habit and the form of the spur being assigned as reasons for referring it by preference to Angraecum.

Aëranthus grandiflora is an evergreen species, producing distichous-ligulate leaves of a bright green colour; the flowers are produced singly from the axils of the leaves; a glance at our plate will perhaps give a better idea of the beauty of this plant than any description. It should be cultivated either in a pot or basket with sphagnum moss and a few lumps of charcoal and be well drained; the East India house is the temperature for it, and it should be suspended from the roof. Care should be taken to keep this plant well shaded from the sun's rays, and an abundance of water should be given during the growing season, as having no pseudo-bulbs, it very soon feels the want of water.

Laelia autumnalis, the side lobes of lip being pure white. This group was awarded a Silver Banksian Medal.

H. Tate, Esq., Allerton Beeches, Liverpool, contributed a fine variety of *Cypripedium insigne* called *Tate's variety*, which is a very striking novelty, the lower sepal having the same pure white apex and lines of dots and spots as the upper sepal.

An interesting exhibit was that sent by T. W. Swinburne, Esq., Winchcombe, Cheltenham, consisting of several good forms of *Cypripedium*; *C. Swinburnei*, a good specimen with nine flowers, and the variety *magnificum* with immense blooms, *C. Indra*, *C. Spicerianum*, *C. insigne*, *C. Leeanum* and varieties, *C. Lady Hutt*, a cross between *C. insigne* and *C. Fitchianum*.

Thomas Statter, Esq., Stand Hall, Whitefield, Manchester, staged *Cypripedium Leeanum giganteum grandiflorum*, one of the largest, if not *the* largest, form we have ever seen; *C. Lucienianum superbum*, *C. Niobe splendens*, *C. Rufus*, *C. plumosum*, *C. Ariadne*, *Laelia elegans nobilis* and *Laelio-Cattleya Tresederiana superba*. W. C. Walker, Esq., Percy Lodge, Winchmore Hill, exhibited *Laelia rubescens* (*L. acuminata*), an abnormal form of *Cypripedium Charlesworthii*, the sepals being twisted, and the beautiful *Oncidium praetextum*. De Barry Crawshay, Esq., Rosefield, Sevenoaks, contributed a handsome form of *Oncidium tigrinum*.

Amongst the trade exhibits we may mention the beautiful *Laelio-Cattleya Lady Rothschild*, *L.-C. Pallas*, and *Cymbidium Traceyanum*, staged by Messrs. J. Veitch & Sons; *Laelia anceps alba*, *Phaio-Calanthe Arnoldiana*, *Restrepia antennifera*, *Helcia sanguinolenta* and several Odontoglossums and Cypripediums, exhibited by Messrs. F. Sander & Co.; a fine group of Cypripediums, consisting of *C. Leeanum superbum*, *C. insigne* and its two varieties *Maulei* and *punctatum-violaceum*, *C. Harrisianum superbum*, *C. Sallierii*, and the fine *C. Pitcherianum Williams' variety*, sent by Messrs. B. S. Williams & Son.

MEGACLINIUM SCHLIEBENIANUM ET AVIDUM

ODONTOGLOSSUM SCHLIEPERIANUM FLAVIDUM.

[Plate 515.]

Native of Costa Rica.

Epiphytal. *Pseudobulbs* compressed oblong, one and a-half to two inches high, diphyllous. *Leaves* ovate-lanceolate, acute, slightly ribbed, deep green, six to nine inches long, one and a-quarter to two inches broad. *Scapes* produced from the base of the pseudobulbs, erect or slightly nodding, eight to ten inches high, bearing from four to six flowers, peduncles invested at intervals with greyish imbricating scales. *Flowers* three and a-half inches from tip to tip of petals, bright sulphur-yellow; sepals, petals and lip barred and spotted transversely at the base with rich golden yellow; *sepals* ovate-lanceolate, acuminate, narrowed at the base; *petals* ovate-oblong or elliptic-ovate, clawed; *lip* obcuneate, emarginate at the apex, provided at the base on each side with retrorse, semi-ovate retuse lobes; callus margined with deep orange-red, wings of column margined with brown hairs.

Odontoglossum Schlieperianum, *H. G. Reichenbach fil.*, *Gardeners' Chronicle*, 1865, p. 1082, with woodcut. *Xenia Orchidacea*, ii., p. 127, t. 143. *Gartenflora*, 1869, t. 605. *Floral Magazine*, t. 461. *Gardeners' Chronicle*, new series, 1886, xxv., p. 269, fig. 50. *Veitch's Manual of Orchidaceous Plants*, part i., p. 66. *Williams' Orchid Grower's Manual*, 7th edition, p. 591. *Linden, Les Orchidées Exotiques*, p. 876.

Odontoglossum Warscewiczii, Bridges, at Stevens' Sale, April 25th, 1856.

Odontoglossum grande pallidum, *Klotzsch*, in *Herbarium Berolinense.*

Odontoglossum grande flavidum, *Klotzsch, teste H. G. Reichenbach.*

Odontoglossum Insleayi macranthum, *Lindley, Folia Orchidacea*, Article *Odontoglossum*, No. 8.

Odontoglossum Schlieperianum flavidum, *H. G. Reichenbach fil.*, *Gardeners' Chronicle*, new series, 1883, xx., p. 135.

Our present subject is a very distinct variety of an old inhabitant of our Orchid houses, and is closely allied to *Odontoglossum Insleayi*, which species it so closely resembles in its habit of growth as to be hardly distinguishable from it. *O. Schlieperianum* made its first appearance in England at Stevens' Auction Rooms in 1856 under the name of *O. Warscewiczii*, it was subsequently found not to be that species, and was afterwards named by the late Professor Reichenbach *O. Schlieperianum* after Adolphe Schlieper, Esq., of Elberfeld, Germany, a zealous collector of Orchids at that time.

Odontoglossum Schlieperianum flavidum was first flowered in the Botanic Gardens, Berlin, and was named by Herr Klotzsch *O. grande flavidum*; it again flowered in September, 1883 in the Victoria and Paradise Nurseries, and was sent to the late Professor Reichenbach for identification, who pronounced it to be a yellow form of *O. Schlieperianum*, which he described under the varietal name of *flavidum* in the *Gardeners' Chronicle*, vol. xx., 1883. This plant produces its blossoms in the autumn months, and its flower spikes proceed from the base of the pseudobulbs, which are compressed ovate, of a dull greyish green. The spikes are four to six-flowered, the individual flowers being about three and a-half inches across, of a bright sulphur-yellow; the sepals, petals and lip being indistinctly transversely barred and spotted with rich golden yellow.

Odontoglossum Schlieperianum should be grown in a mixture of rough fibrous peat and sphagnum moss, and be well elevated above the rim of the pot. It should be placed at the warm end of the house devoted to the culture of Odontoglossums; propagation is effected by division of the pseudobulbs.

LYCASTE SMEEANA.

LYCASTE SMEEANA.

[Plate 516.]

Native of Guatemala.

Epiphytal. *Pseudobulbs* ovate, tumidly ribbed, two inches high, deep green. *Leaves* broadly ovate-lanceolate acuminate, ribbed, deep green. *Scapes* axillary from the base of the pseudobulbs, one-flowered, erect, slender, invested with greyish green sheathing bracts. *Flowers* four inches across, pure white; *sepals* ovate acute, of good substance, purest white; *petals* ovate acute, white, densely covered with minute crimson-purple spots except near the apex; *lip* cucullate, three-lobed, mid-lobe ovate acuminate, reflexed, margined with purple, besides rows of small purple lines, the whole of the lip thickly covered with minute purple spots, callus with a very short, obscurely-keeled free portion, greenish yellow. *Column* clavate, greenish white, spotted with purple at the base.

Lycaste Smeeana, *H. G. Reichenbach fil.*, *Gardeners' Chronicle*, new series, 1883, xx., p. 198. *Veitch's Manual of Orchidaceous Plants*, part. ix., p. 97. *Williams' Orchid Grower's Manual*, 7th edition, p. 479. *Linden, Les Orchidées Exotiques*, p. 818.

This very interesting and beautiful plant is a supposed natural hybrid between *Lycaste Skinneri* and *L. Deppei*, and was first flowered in the select collection of Orchids belonging to A. H. Smee, Esq., The Grange, Carshalton, after whom it was named in 1883 by the late Professor Reichenbach. In habit of growth it most resembles *L. Deppei*, the flowers being intermediate in size between the two supposed parents, and are white excepting the lip which is bordered with light purple and spotted over its entire surface. It produces its flowers during the autumn and winter months, and is therefore a valuable and welcome acquisition, especially for small collections, as Orchid flowers are scarce at that period. Lycastes do not appear to take high rank in the eyes of the Orchid-loving public, yet the chaste beauty of many of the species, such as *L. Deppei*, *L. Harrisoniae* and its variety *eburnea*, figured in the third volume on plate 100 of our work, *L. plana*, depicted on plate 230 of the fifth volume, and its variety *Measuresiana*, figured in the seventh volume on plate 306. *L. Schilleriana*, *L. Skinneri*, and its many varieties, one of which, *Reginae*, has been pourtrayed in this work, on plate 283 of the sixth volume, and lastly, the subject of the present plate entitles

them to a due share of attention at our hands, while the delicious scent emitted by others, amongst which we may mention: *L. aromatica*, *L costata*, *L. cruenta*, *L. lanipes*, increases this value considerably. Moreover they require but little attention, and as their flowers last weeks in perfection in many cases, they amply repay any care bestowed upon them.

Lycaste Smeeana should be grown in a pot, in a compost of good fibrous peat and spagnum moss, with a little charcoal added; or it may be grown in all peat. The cool house suits this species best.

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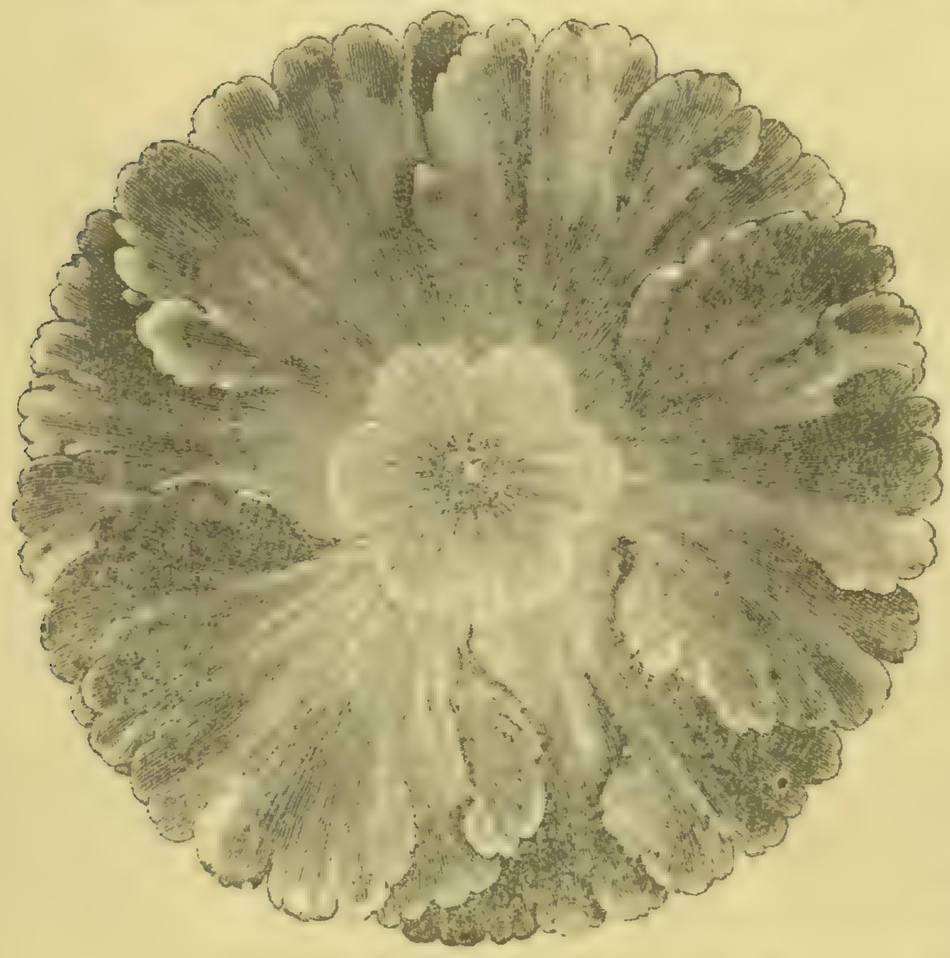

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VANDA COERULEA.

LORD ROTHSCHILD'S VARIETY.

[PLATE 517.]

Native of the Khasya Hills, Northern India.

Epiphytal. *Stem* erect, three feet or more in height, producing at intervals numerous long, stout, flexuous roots near the bases of the leaves. *Leaves* distichous, ligulate, channelled above, leathery in texture, and dull green in colour, from six to eight inches in length, unequally truncate at the apex, with a concave notch and acute lateral lobes. *Scape* erect, much longer than the leaves, racemes many-flowered (ten to twenty). *Flowers* three to five inches across; *sepals* and *petals* nearly equal (the lateral sepals being somewhat the largest), membranous, flat, obovate, blunt, shortly clawed, of a rich pale blue, varying in intensity in some parts, the petals of a much deeper shade, the whole flower tessellated with rich deep ultramarine blue; *lip* small, deep violet-blue, linear-oblong, obtuse at the apex, with two diverging lobes, bearing three lamellae or plates on the disc, and furnished with two triangular acuminate lobes at the base; *spur* short, blunt and curved, smooth within.

VANDA COERULEA, *Griffith's Itinerary*, p. 88. *Botanical Register*, sub. t. 30. *Paxton's Flower Garden*, i., t. 36. *Lindley, Folia Orchidacea*, Art. *Vanda*, No. 8. *Journal of the Royal Horticultural Society of London*, 1851, vi. p. 8 (with woodcut). *Warner's Select Orchidaceous Plants*, i., t. 18. *Pescatorea*, t. 29. *Reichenbach, Xenia Orchidacea*, i., t. 5. *L'Illustration Horticole*, 1860, t. 246. *Flore des Serres*, t. 609. *Moore's Illustrations of Orchidaceous Plants, Vanda*, t. 2. *L'Horticulture Française*, 1862, t. 1. *Jennings' Orchids*, t. 34. *Lemaire, Le Jardin Fleuriste*, t. 102. *Flore des Serres*, vi., t. 609. *De Puydt, Les Orchidées*, t. 45. *Lindenia*, iv., t. 160. *Reichenbachia*, ii., t. 57. *L'Orchidophile*, 1890, p. 369. *Gartenflora*, 1890, t. 1332. *Revue d'Horticulture Belge*, 1891, p. 165, t. 21. *Veitch's Manual of Orchidaceous Plants*, Part vii., p. 91. *Linden, Les Orchidées Exotiques*, p. 977. *Hooker fil., Flora of British India*, vi., p. 51. *Williams' Orchid Album*, vi., t. 282. *Williams' Orchid Grower's Manual*, 7th edition, p. 740.

VANDA COERULEA, LORD ROTHSCHILD'S VARIETY, *supra*.

This is without doubt the finest dark-coloured variety of this, the Queen of the East Indian Orchids, that we have yet had the good fortune to see; it was kindly communicated to us by Mr. Hill, gardener to Lord Rothschild, Tring Park. The sepals and petals are much broader than in the type, and of greater substance, the ground colour being cobalt-blue, distinctly and beautifully reticulated with deep ultramarine-blue; the lip is also of the same deep colour.

A full account of this beautiful species, together with the cultivation, has already been given in this work in Vol. vi., under Plate 282, so that it is needless to repeat it here.

Review.—The Orchids of Burma (including the Andaman Islands) Described. Compiled from the works of various authorities, by Captain Bartle Grant, Rangoon, 1895. 8vo.

To residents in India and Burma, who happen to take an intelligent interest in Orchids, and who echo the author's complaint that he found the want of a book of reference at a moderate price, suitable for a beginner's use, a serious obstacle to his progress, the present work may prove a great boon. As the title sufficiently indicates, it does not claim to be an original treatise on the subject, but has been compiled from "William's Manual" (we presume *Williams' Orchid Grower's Manual* is meant), Parish's and Veitch's works, which have produced the "Florists' Kinds," while those of purely botanical interest have been taken from *The Flora of British India*, *The Botanical Magazine*, and *The Kew Bulletin*. The result is a somewhat heterogeneous conglomeration of technical diagnoses and popular descriptions, which we imagine must be somewhat confusing to amateurs as well as students, for whom the work is stated to have been compiled. An experienced compiler and trained botanist would of course have steered clear of shoals like these, by re-modelling some and curtailing others, but this would have entailed a considerable amount of labour, besides a knowledge of technical details, to which we fear the gallant Captain can lay little claim. There are other serious defects, to some of which we deem it necessary to call attention. The names of genera, which in some cases are printed in bold large capitals while in others they appear in small capitals or even lower case type, are usually followed by general remarks and cultural details, taken either from Parish's or Williams' Manual; then follows an alphabetical enumeration of species, and finally a key to species. So far so good, where genera containing two or more species are concerned, but when monotypic genera are thus unnecessarily burdened, one is apt to exclaim, *cui bono?* As a matter of fact, some of these so-called "keys" reduce themselves simply to a repetition of generic characters in rather more technical garb than what precedes the list of species. When we come to large genera, where a good workable key would be of great assistance, we are sorely disappointed. Take Dendrobium as an instance; it is first of all divided into series I. and II., but no characters are given for either. Series I. is next divided into sections, *i.e.*, Sarcopodium, Bolbodium, etc.; again no characters are given, and the student is left to guess to which of the sections any given specimen may pertain; the first section is properly sub-divided into two headings, according to whether the flowers are solitary or the scapes are several-flowered, but the next section merely contains specific names without differentiating characters. How the student or amateur with a lot of material before him is to succeed in correctly

(*Continued under Plate* 518).

ANGRAECUM SESQUIPEDALE.

[Plate 518.]

Native of Madagascar.

Epiphytal. *Stem* simple, two or three feet high, sending out aërial roots at intervals, covered by the sheathing bases of the leaves. *Leaves* distichous, leathery, dark green, ligulate-oblong, twelve inches long, keeled, apex blunt, obliquely bilobed. *Scape* axillary, producing from one to four large ivory-white fragrant flowers which measure ten to twelve inches across; *bracts* ovate-acute, brown, one-half or one-third the length of the pedicelled ovaries. *Sepals* cuneate-oblong, acuminate; *petals* somewhat racket-shaped, acuminate; *lip* panduriform, obcordate at the base, with acuminate reflexed apex; *spur* greenish, from twelve to eighteen inches long.

Angraecum sesquipedale, *Du Petit Thouars, Histoire particulière des Orchidées recueillies sur les trois îles australes d'Afrique*, tt. 66-67. *Lindley, Gardeners' Chronicle*, 1857, p. 253 (with woodcut); *Id.*, 1873, page 255, fig. 53; *Id.*, 1879, new series, xii., p. 305, fig. 49. *Botanical Magazine*, t. 5113. *Bateman, A Second Century of Orchidaceous Plants*, t. 151. *Flore des Serres*, tt. 1413-14. *Warner, Select Orchidaceous Plants*, i., t 31. *L'Illustration Horticole*, xiii., t. 475. *Gartenflora*, 1872, t. 744. *Jennings' Orchids*, t. 3. *Reichenbachia*, i., t. 14. *Lindenia*, iv., t. 175. *Veitch's Manual of Orchidaceous Plants*, Part vii., p. 138 (with plate). *The Gardening World*, 1894, x., p. 73 (specimen plant); *Id.*, p. 421 (with woodcut). *Williams' Orchid Grower's Manual*, 7th edition, p. 101 (with woodcut). *Linden, Les Orchidées Exotiques*, p. 578.

Aëranthus sesquipedalis, *Lindley, Genera and Species of Orchidaceous Plants*, p. 244.

We are pleased to be able to give a plate of this wonderful and popular Orchid, believing the same will be welcome to our subscribers. It is without doubt one of the most chaste and, at the same time, curious plants to be found in the whole family of Orchids.

Angraecum sesquipedale was first discovered by Du Petit Thouars, a French botanist and explorer, and was described by him in his work on the Orchids of the African Islands. It was, however, to the Rev. W. Ellis, of Hoddesdon, a very old friend of ours, when engaged upon missionary work in Madagascar, that the credit is due of introducing it in a living state into this country in 1855, one of this importation—a small one—having produced its flowers two years afterwards. Since this time it has been frequently re-introduced, and it is now to be found in most collections where warm Orchids are grown. Mr. Ellis has described this plant as being found by him in the lowest and hottest districts on straggling trees at the edge of the forest, where there is plenty of light and air. *A. sesquipedale* in

habit of growth resembles the Aërides, the stem being simple, producing its rough greyish roots freely from the stem. The leaves are close set, distichous, leathery, dark green, bilobed at the apex, and keeled. The peduncles are axillary, and bear from one to four of their large and wonderful flowers, which are of a shining ivory-white, about twelve inches in diameter. These are furnished with a long spur twelve to eighteen inches in length, hanging downwards from the flower. It produces its flowers in November, December and January, and these last about three weeks in perfection if kept from the damp.

This plant should be grown in a pot in sphagnum moss, and have ample drainage. It should be placed in the East India house, and receive an abundant supply of water during the growing season.

Our plate was taken from a specimen which flowered in the collection of Sir Trevor Lawrence, Bart., Dorking, and we are indebted to this gentleman for the opportunity of figuring it.

(Review.—*Concluded from Plate* 517).

identifying it with such scant assistance we fail to see. The Captain would have been well advised had he sought the assistance of a competent botanist, were it only to avoid such glaring errors as giving specific names like *alba*, *elegans*, or *barbata* a capital initial, which abound throughout the book. Messrs. Veitch will, we imagine, be somewhat startled to find it stated their work is out of print. After reading the rather disparaging remarks on Williams' Manual we are not a little astonished to find that, roughly speaking, about 75 or 80 per cent. of the descriptions are literally copied from that work, besides notes as to cultivation, which we fear, however, will not be of great value to the class of readers for whom this book has ostensibly been compiled, in view of the fact that the cultural directions are based on experience in cultivation under glass The absence of any indication at the top of the pages as to which genus is being treated of is another serious blemish, as it is most annoying to have to turn back page after page sometimes before we can be sure what we have before us. We regret having to somewhat severely criticise this work, which, had a little more care and ability been expended on it, would have formed an extremely useful handbook for the particular class of people to whom it appeals. With the exceptions mentioned above, it appears to have been revised carefully enough, and the printing redounds greatly to the credit of the Hanthawaddy Press, from which it is issued. Should ever a second edition be required, we trust some of our hints will bear fruit in the directions indicated.

LAELIO-CATTLEYA BLESENSIS.

[Plate 519].

Garden Hybrid.

Epiphytal. *Pseudobulbs* fusiform, from five to twelve inches or more high, one or two-leaved, light green, covered mostly by silvery grey sheathing scales. *Leaves* dark green, leathery, elliptic-oblong, blunt, keeled at the back. *Scape* producing from two to five handsome flowers. *Sepals* obovate-lanceolate, acuminate or acute two inches long, half an inch broad, of a delicate rosy magenta hue, veined longitudinally with faint magenta-purple; *petals* obovate or elliptic-obovate, acute, slightly reflexed at the tips, nearly an inch broad, rosy magenta, faintly feathered at the margins and veined in the middle with delicate purplish magenta; *lip* three-lobed, lateral lobes rolled over the column, meeting at the edges, thus forming a funnel, pure white inside, faintly tinged with purplish rose at the margin, white flushed with pale rose towards the margins, the free portion of the margins (*i.e.*, that surrounding the throat) prettily crisped and undulated, and usually bordered with purple-magenta; mid-lobe of the richest purple-magenta, veined from the middle of the throat outward with even deeper and richer purple. *Column* white, strongly veined and marked with rosy purple; pollen masses four in number.

Hybrid Cattleya (pumila x Loddigesii), *L'Orchidophile,* 1890, p. 289.

Cattleya Blesensis, *Hort. Gall. Revue Horticole,* 1893, p. 424 (with plate). *Williams' Orchid-Grower's Manual,* 7th ed., p. 154.

With the exception of Cypripedium, a greater number of hybrids of Laelia and Cattleya have been produced than in any other genus of Orchidaceous plants; and the reason is not far to seek, for, apart from the number of species as a basis of operation, the gaudy and attractive appearance of most of them, and the readiness with which the two genera were found to intercross, were ample inducements for the hybridiser. In spite of the countless number of successful crosses—a great many of which, however, will doubtless be eliminated in course of time—there is still ample room for good forms, and any hybrid which shall combine the characters of two distinct types, themselves in favour on account of beauty in form and colour, will always be welcomed by every lover of this group of plants; and such a one we do not hesitate to pronounce the present subject. Mr. Charles Maron, who raised this gem while in charge of the gardens of M. Darblay, at Corbeil, near Paris, states that the seed was sown in February, 1887, while the first flowers expanded in October, 1890; these, however, fell far short of the beauty they attained later, when the plants became stronger.

Laelio-Cattleya Blesensis is a strong-growing plant, intermediate in habit between its two parents. The pseudobulbs measure from five to twelve inches in height, while the leaves are dark green, of a leathery texture, and elliptic-oblong. The scape produces from two to five handsome rosy magenta flowers, with a rich purple-magenta mid-lobe to the lip. The flowers are produced at various periods of the year, the plants usually blooming twice in one year. The whole stock of this beautiful hybrid was acquired by us.

Laelio-Cattleya Blesensis was named in honour of the French town of Blois, the native place, we believe, of the raiser. It thrives best if placed in baskets with the compost usual for Cattleyas, and suspended near the roof.

Aëranthus grandifora (Plate 514).—By an unfortunate oversight we omitted to state that we were indebted to J. W. Potter, Esq., of Sligachan, Croydon, for the opportunity of figuring this handsome species. Mr. Potter informs us that the Aëranthus was amongst a batch of plants sent to him by a friend from Madagascar.

SPATHOGLOTTIS GRACILIS.

[Plate 520]

Native of Borneo.

Terrestrial. *Pseudobulbs* small, conical, produced from a rhizome, invested with the remains of the brownish imbricating scales. *Leaves* plaited, oblong-lanceolate, acuminate, bright green, three feet or more in length. *Scape* erect, usually longer than the leaves, producing from eight to ten bright canary-yellow flowers which measure three inches across. *Sepals* and *petals* sub-equal, obovate-oblong, acute, the former keeled at the back; *lip* three-lobed, lateral lobes obovate-truncate, incurved, bright yellow, spotted with carmine at the base; mid-lobe very narrow at the middle, provided with two auricles at the base, one on each side, the apex broadly obcordate, dilated.

Spathoglottis gracilis, *Rolfe*, in *Herbarium Kewense*. *J. D. Hooker*, in *Botanical Magazine*, 1894, t. 7366. *Rolfe*, in *Reichenbachia*, 2nd series, ii., p. 95, (with analytical figure).

The history of our present subject is somewhat involved owing to the fact that no less than three species, *Spathoglottis aurea*, *S. gracilis* and *S. Kimballiana*, have been confused one with the other. The two latter were introduced at the same time, in 1886, from Borneo by Messrs. Sander; the last named was exhibited by Sir Trevor Lawrence, Bart., before the Royal Horticultural Society on March 27th, 1888, and figured in the *Gardeners' Chronicle*, 1888, 3rd series, vol. iv., p. 93, fig. 9, but Professor Reichenbach merged the name into the synonymy of *S. aurea*. Mr. Rolfe thinks it is very doubtful whether *S. aurea* is in cultivation at the present time, although *S. gracilis* is sometimes cultivated under that name. When we first received the material from which our plate was taken under the name of *S. aurea* the fact of this confusion of the three allied species had been overlooked, and was not discovered till the description was drawn up and after the plate had been printed; this will account for the discrepancy between the names on the plate and that in the text. Comparison with the published descriptions and figures convinced us at once that what, hitherto, we had considered to be *S. aurea* proved to be *S. gracilis*, and the Editor of the *Orchid Review* was obliging enough to confirm our opinion.

Spathoglottis gracilis is a graceful and handsome terrestrial plant, the small pseudobulbs being produced from a creeping rhizome. The leaves are from two to three feet long, bright green plaited, ovate-lanceolate acuminate. The scape is produced from the base of the pseudobulbs, and bears from eight to ten handsome canary-yellow flowers, with some carmine spots and marks on the lip.

The plant from which our plate was reproduced flowered in June, 1893, in the magnificent collection of M. le Comte Adrien de Germiny, at Gouville, Seine Inferieure, France, where so many gems of the noble Orchid family have found a a home, and thrive under the able management of the genial head gardener, M. Pierre Vincent.

Spathoglottis gracilis, as a glance at our plate will show, is a handsome and interesting addition to our Orchid houses, though it may, perhaps, not be considered to have equal claims at our hands as the more showy species, such as *S. Augustorum* and *S. Kimballianum*. However, it certainly has a charm of its own, and as it is not, we believe, a difficult kind to cultivate, it cannot fail to prove a favourite with many, especially as the colour of the flowers is far from common in Orchids. Like the other members of the genus, *S. gracilis* is a terrestrial species, and seems to thrive best if grown in a compost of good fibrous loam, peat, and chopped sphagnum, to which a little sharp silver sand should be added to keep the mixture open. A few lumps of charcoal will be found beneficial, as it practically prevents the soil becoming sour. The plants may be placed either in pots or Orchid pans, the proper amount of drainage being of course essential. They should be suspended near the glass in the East Indian house, and receive a liberal supply of water, while the atmosphere should also be charged with abundant moisture. A short period of rest after the growths have been completed—during which they may be removed to a cooler place, and the supply of water gradually diminished—will give the plants an opportunity to ripen their growths.

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CATTLEYA WARNERI.

[Plate 521.]

Native of Brazil.

Epiphytal. *Pseudobulbs* cylindrical or fusiform, furrowed longitudinally, mostly covered by a greyish sheath, from three to three and a-half inches long, monophyllous. *Leaves* broadly ligulate, coriaceous, six to eight inches long, three inches wide. *Scapes* produced from the top of the pseudobulbs, bearing from three to five large handsome flowers, measuring fully six inches across. *Sepals* lanceolate, entire, with recurved margins of a beautiful magenta-rose; *petals* very large and broad, measuring two and a-half inches across, ovate, denticulate, crispulate near the apex, of a beautiful magenta-rose with slight veining of a darker shade; *lip* three-lobed, very large, measuring three inches in length, the mid lobe being two inches wide; lateral lobes appressed, rosy purple, throat yellow veined with orange-yellow, bordered with white; mid lobe of a rich purple-magenta, the margin strongly undulated, and of a rosy purple shade, which is continued round the anterior edges of the side lobes.

Cattleya Warneri, *Moore, M.S. in Warner's Select Orchidaceous Plants*, i., t. 8. *Floral Magazine*, t. 516. *Gardeners' Chronicle*, new series, xx., 1883, p. 369, f. 57. *Revue Horticole Belge*, 1888, p. 177. *Linden, Les Orchidées Exotiques*, p. 633. *Williams, Orchid Grower's Manual*, 7th edition, p. 193.

Cattleya labiata Warneri, *Reichenbachia*, ii., t. 95. *Veitch's Manual of Orchidaceous Plants*, part ii., p. 27.

This is without doubt one of the handsomest of the summer-flowering types of Cattleya. In habit of growth it differs but little from the autumn-flowering form of *Cattleya labiata*, except that the leaves are broader, and the flowers are produced from single sheaths instead of double, as in the case of the type. It was first flowered by the late Mr. Robert Warner in 1860, and was by him exhibited at the Royal Botanic Society's exhibition in Regent's Park, when a Silver Medal was awarded to it. It produces its flowers during June and July, and on that account is valuable as an exhibition plant, its finely coloured blossoms contrasting well with *C. Mossiæ* and its varieties.

Cattleya Warneri grows to a height of about sixteen inches, the leaves being about three inches across, of a thick leathery texture, dark green in colour. The flowers are large and showy, as a glance at our plate will show; they are sometimes produced with as many as five on a spike, but this is an unusual number. It should be grown in a pot or a basket suspended from the roof of the house, in a compost of peat and sphagnum moss. It requires a good amount of heat during the growing season, which is in the winter and spring months, the flowers are

produced from the uncompleted bulb. This is matured soon after the flowering time is over. The plant requires a good season of rest, and during this period water should be withheld, only just sufficient being given to prevent the shrivelling of the bulbs.

Cattleya Warneri is propagated in the same way as other Cattleyas, by the division of the rhizome; the best time to perform this operation is just as the plant is starting to grow. Our present subject was taken from a well-grown plant in the collection of Lady Piggott, Wexham Park, Slough, where, at the time of our visit, there was a nice collection of well-grown Orchids under the care of Mr. Capp, to whom great credit is due for the way in which they were cultivated.

Obituary.—It is with deep regret we have to record the death of Mr. Robert Warner, at his residence, Widford Lodge, Chelmsford, on the 17th December, 1896, aged eighty-two. The deceased gentleman was well known in horticultural circles, and his collection of Orchids until recently, when the bulk of it was dispersed, was considered one of the finest and foremost in the United Kingdom. As an instance of his enthusiasm, we need only recall the fact of his sending, at great expense and risk, a valuable collection of Orchids to the International Horticultural Exhibition at St. Petersburg, in 1867. Mr. Warner had been one of the co-editors of the Orchid Album from its beginning, and although in his declining years he ceased to take an active part in the editing, his interest in the work remained to the last; while his *magnum opus*, "*Select Orchidaceous Plants*," which he had the pleasure of completing, forms an important contribution to Orchid literature which will hand his name down to posterity, and be a lasting testimony to his skill and industry.

DENDROBIUM TRANSPARENS ALBUM.

[Plate 522.]

Native of Assam.

Epiphytal. *Pseudobulbs* stem-like, slender, about eighteen inches or more in height, bearing numerous distichous leaves which are somewhat broadly lanceolate, from three to four inches long, pale green, deciduous. *Flowers* produced usually in pairs from the nodes of the leafless pseudobulbs, the upper nodes usually bearing only single flowers, the lower nodes sometimes producing three flowers; they measure from one inch to one and a-half inches across, and are pure white without the slightest trace of colour anywhere, except the pedicels which are tinged with pale green; *sepals* narrowly lanceolate, acuminate; *petals* obovate-lanceolate; *lip* obovate oblong, ciliolate, three-lobed, the lateral lobes enclosing the column.

Dendrobium transparens, *Wallich, Lindley's Genera and Species of Orchidaceous Plants*, p. 79. *Paxton's Flower Garden*, i., t. 27. *Lemaire's Jardin Fleuriste*, t. 68. *Botanical Magazine*, t. 4663. *Veitch's Manual of Orchidaceous Plants*, part iii., p. 81. *Williams, Orchid Album*, ix., t. 396; *Orchid Grower's Manual*, 7th edition, p. 365.

Dendrobium transparens album, *Rolfe, Gardeners' Chronicle*, 3rd series, vi., 1889, p. 95. *Williams, Orchid Grower's Manual*, 7th edition, p. 366.

Dendrobium transparens Souvenir d'Alec, *Journal of Horticulture*, xxv., 1892, p. 73, f. 10.

Although *Dendrobium transparens* has been in cultivation since 1852, and frequent importations have arrived in this country, no albino of this chaste and beautiful species was recorded until the subject of our plate flowered in the collection of Hamar Bass, Esq., Byrkley, Burton-on-Trent. Mr. James Hamilton, under whose able management so many fine specimens of Orchids thrive and flourish, has obligingly communicated the following particulars regarding its introduction. In 1888 a number of plants of *D. lituiflorum Freemanii* were purchased by him; on flowering, half of the pseudobulbs in one pot proved to be the white form of *D. transparens*, and it was exhibited by him at a meeting of the Royal Horticultural Society, in the Drill Hall, Westminster, under the name of *C. transparens Souvenir d'Alec*, in memory of Mr. Hamar Bass' son, who had died that year. A glance at our illustration will show that the flowers are of the purest white, without a trace of colour anywhere except on the pedicels, which are slightly tinged with pale green. The flowers also appear to be rather smaller than those of the type, but this is amply compensated by the greater number of flowers produced by each pseudobulb.

Dendrobium transparens album requires the same treatment as that given by us for *D. transparens* in Volume ix. of this work, plate 396. Like the type it is well adapted for growing in small teak-wood baskets, or in shallow pans, so that they may be suspended near the roof-glass, fully exposed to the sun and light; some shading, however, will be necessary when the sun is very powerful. An abundant supply of moisture to the roots as well as in the atmosphere, and a judicious admission of air, are conditions essential to the welfare of the plant. During the growing season especially the supply of water must be liberal, but during the resting period it may be reduced to a minimum, just sufficient water being required to prevent the pseudobulbs becoming shrivelled. As the species flowers after the resting period, the plant requires a moderate amount of water at its roots as soon as the flower-buds begin to show, to enable the plant to develop the flowers, which will last much longer in beauty when properly nourished.

CYMBIDIUM TIGRINUM.

[Plate 523.]

Native of Tenasserim.

Epiphytal. *Pseudobulbs* roundly ovoid, one inch or more in height, furrowed, invested when old with the remains of the sheathing base of the leaves, the younger ones bearing from two to five leaves. *Leaves* dark green, leathery, lanceolate-oblong, acuminate, from two to six inches long, recurved, slightly twisted. *Scapes* slender, produced from the base of the pseudobulbs, bearing from three to five large flowers. *Sepals* and *petals* linear-lanceolate, acute, two inches long; inside olive-green suffused with dull yellow, margined with vinous red, and covered at the base with numerous minute red dots; outside chestnut-brown with a narrow greenish yellow margin; *lip* clawed, oblong, three-lobed, the lateral lobes rounded, erect, yellow, covered inside with oblique purplish brown bands; mid lobe recurved, oblong, apiculate, white, marked with short transverse purplish brown streaks.

Cymbidium tigrinum, *Parish, M.S. Hooker, Botanical Magazine*, t. 5457 *Hooker, Flora of British India*, vi., p. 9. *Berkeley, Gardeners' Chronicle*, 3rd series, i., 1887, p. 736. *Veitch's Manual of Orchidaceous Plants*, Part ix., p. 22. *Linden, Les Orchidées Exotiques*, p. 684. *Williams, Orchid Grower's Manual*, 7th edition, p. 223.

The genus Cymbidium contains a large number of species, although but comparatively few have found their way into Orchid collections, owing doubtless to the fact that many of them have inconspicuous dull-coloured flowers; on the other hand, the bulky size of some may account for their being excluded from the houses of amateurs who have but a limited space at command. Where space, however, is only a secondary consideration, some Cymbidiums well repay the room allotted to them, by an abundance of showy flowers. *Cymbidium tigrinum* combines the advantages of being compact in size, producing large and handsome flowers which last a long time in perfection, and being of easy culture; with all these qualities in its favour it should find its way into even the smallest collection.

Cymbidium tigrinum has short ovate pseudobulbs, seldom exceeding one and a-half inches in height; they bear two or more oblong-lanceolate acuminate leaves, which are dark green and slightly recurved. The scapes are slender and nodding, producing four or five handsome, comparatively large flowers, measuring about three and a-half inches across. The sepals and petals are narrow lanceolate, light chestnut-brown at the back, yellowish fawn shading into greenish yellow in front, sub-equal, the former erect and slightly twisted, the latter incurved. On the inner surface they are covered with minute dark brown spots at the base, and a narrow margin

of lighter yellow runs along the edges. The lip is large, three-lobed, white, covered with transverse elongated reddish brown spots.

The species was discovered by the Rev. C. S. Parish in the mountains of Tenasserim, at an elevation of 6,000 feet, as far back as 1863; it is, however, far from common in collections, as importations are neither large nor numerous. The cool end of the Cattleya house will be found most suitable for this plant. It should be potted in a compost of good rough fibrous peat and loam, the latter material predominating, with ample drainage; plenty of pot room should be given, as the plant produces thick fleshy roots freely. During the growing period a copious supply of water will be found essential, which afterwards may be gradually diminished. Propagation may be effected by dividing the pseudobulbs. The plant which forms the subject of our plate, flowered in the collection of H. S. Leon, Esq., of Bletchley Park, Bucks, where so many choice specimens of Orchids bear testimony to the able management of Mr. Hislop, the gardener.

CYPRIPEDIUM GRATRIXIANUM.

[Plate 524.]

Garden Hybrid.

Terrestrial. *Leaves* ovate-lanceolate acute, four and a-half inches long, one and a-half inches broad, light green tessellated with dark green, densely spotted with red at the back. *Scapes* one-flowered. *Flowers* three and a-half inches across; *dorsal sepal* broad and flat, the acute apex slightly incurved, ground colour rosy purple, becoming paler towards the median zone, which is suffused with a yellow tinge at the base, the whole margined with pure white; six or seven converging purple veins occur on each side of the median purple bar, and a few rows of dark purple spots are scattered over the basal half; *petals* broad, of a purplish rose ground colour, which becomes paler towards the median part, changing into a yellowish tint at the base, the whole densely covered with smaller or larger dots of deep purple, mostly arranged in longitudinal rows, becoming especially concentrated at the base; *lip* large, well formed, of a rich deep purple veined with black-purple, and shading off into yellowish green at the back. *Staminode* large, flat, dark purple.

Cypripedium Gratrixianum, *Williams, supra.*

The subject of our plate is, without exaggeration, one of the finest and handsomest hybrid Cypripediums that have been produced of late. The number of crosses effected in this popular genus is enormous, as a glance at the lists compiled by Mr. Hansen and Mr. Chapman will amply prove, and it is, therefore, not surprising that amongst such a host of forms produced at random, a large proportion are, and must of necessity be, inferior in many respects to others. Of these inferior forms it may safely be predicted that they will, after a short duration, vanish never to be seen again; while the better and finer forms will hold the field as long as Cypripediums appeal to the fancy and aesthetic sense of a small section of mankind. With these latter we have no hesitation in classing the hybrid now figured, which for beauty in form and colour will hold its own amid its many competitors for popular favour.

Cypripedium Gratrixianum belongs to a well-marked group of hybrids which includes amongst others such forms as *C. conco-Lawre* and *C. Lawrebel.* It was obtained as a result of crossing *C. bellatulum* with *C. Enfieldense*, this latter, itself a hybrid, being the result of a cross between *C. Hookerae* and *C. Lawrenceanum.* *C. bellatulum* has already given rise to a great number of fine hybrids, all more or less noteworthy. *C. Enfieldense*, on the other hand, has not, hitherto, been employed as the progenitor of new forms; this is no doubt accounted for by its hybrid nature, for, as a rule, hybridisers prefer species for crossing, since hybrids when employed for this purpose frequently prove but indifferent parents, being

rather prone to atavism, or, in other words, they display a tendency to revert to the original forms. *C. Gratrixianum* combines the characters of the three species concerned in its origin—*C. bellatulum* which can be traced in the petals; *C. Hookerae* in the pouch; and *C. Lawrenceanum* in the dorsal sepal.

Cypripedium Gratrixianum has light yellowish green ovate-lanceolate acute leaves, four and a-half inches long and one and a-half inches broad. The flowers are bold and handsome, rather short-stalked. The broad flat dorsal sepal is of a rosy purple ground colour margined with white, and with converging purple stripes; the median portion is much paler, shading into yellowish towards the base, where also occur a few rows of dark purple spots. The petals are broad and somewhat flattened and curved, of a bright purplish rose ground colour, the median portion suffused with pale yellow, which becomes intenser towards the base, the whole covered with innumerable minute spots and dots of a dark purple, arranged mainly in rows, smaller and closer together at the base, larger and more scattered towards the apex. The pouch is somewhat elongated, dark mauve-purple shading into a lighter purple towards the dorsal side, and veined with deep purple laterally.

To succeed well in growing this plant, it should be potted in a mixture of brown peat fibre and living sphagnum moss; ample drainage should be given, as otherwise the peat is apt to become sour, which would be fatal to the well-being of the plant. It will be found to do well in the East Indian house, and during the growing season it requires a liberal supply of water. During the dark and dull days of winter a smaller quantity will suffice, although the plants should never be allowed to become dry; great care and circumspection is therefore required in this respect. The atmosphere also should be kept in a moist state, as otherwise thrips will undoubtedly commit ravages which will permanently disfigure the plants. The subject of our illustration flowered in the collection of S. Gratrix, Esq., of West Point, Whalley Range, Manchester, to whom we have much pleasure in dedicating it. The Orchid collection at West Point is confided to the charge of Mr. McLeod, and bids fair to become one of the finest in the kingdom.

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IL 526

CATTLEYA SCHILLERIANA

CATTLEYA SCHILLERIANA.

[Plate 525.]

Native of Brazil.

Epiphytal. *Pseudobulbs* fusiform, sub-terete, three inches or more in height, invested with greyish and purplish sheathing scales, diphyllous. *Leaves* leathery, oblong-lanceolate, acute, three to four inches long, dull green above, purplish below. *Scapes* terminal, two-flowered. *Flowers* large, six inches across; *sepals* and *petals* sub-equal, spathulate, undulated at the edges, yellowish suffused with rose, and densely covered with purple dots and spots, the dorsal sepal and the petals being more sparsely spotted than the ventral sepals; *lip* three-lobed, lateral lobes bluntly triangular, white veined and suffused with rosy purple, enclosing the column; front lobe ob-reniform, crispulate at the margin, deep rich amethyst-purple, veined with still deeper purple, the basal portion bright yellow with some amethyst-purple veins.

Cattleya Schilleriana, *H. G. Reichenbach fil.*, *Berliner Allgemeine Gartenzeitung*, 1857, p. 335. *Flore des Serres*, t. 2286. *Gartenflora*, 1889, t. 1290. *Veitch's Manual of Orchidaceous Plants*, part ii., p. 45. *Williams, Orchid Grower's Manual*, 7th edition, p. 184.

Cattleya Aclandiae Schilleriana, *Jennings' Orchids*, t. 25.

Epidendrum Schillerianum, *H. G. Reichenbach fil.*, *Xenia Orchidacea*, ii, p. 36, t. 111.

Cattleya Schilleriana concolor, *Hooker, Botanical Magazine*, t. 5150.

Cattleya Schilleriana Regnelli, *Williams, Orchid Grower's Manual*, 7th edition, p. 184.

Cattleya Regnelli, *Warner, Select Orchidaceous Plants*, ii., t. 25.

Cattleya Schilleriana Lowii, *Journal of Horticulture*, xxv., 1892, p. 187, fig. 26.

Although one of the most variable Cattleyas as regards colour, it is but rarely that such a rich form turns up as we now have the pleasure of illustrating. *Cattleya Schilleriana* first appeared in the collection of Consul Schiller, of Hamburg, who imported it from Brazil, and whose gardener, Herr Stange, succeeded in flowering it. A little later it also appeared in Mr. Louis Van Houtte's Nurseries in Ghent, while two years afterwards Messrs. Backhouse & Son, of York, sent flowers to Sir William Hooker, who figured it in the *Botanical Magazine*, under the varietal name *concolor*, as they differed slightly in colour from those first described. Many other different forms have since appeared, some of which have been thought worthy of varietal names. One of these was considered by the late Mr. Robert Warner to be sufficiently distinct to be ranked as a separate form, and he described it in his

Select Orchidaceous Plants as *C. Regnelli*; but considering the wide range of shades and hues presented by the various forms of *C. Schilleriana* it would be unphilosophic and inconsistent to separate one form and to unite all the others, and the only course open, therefore, is to consider them all as varietal forms of *C. Schilleriana*. The plant now figured flowered in May, 1896, in the Victoria and Paradise Nurseries.

Cattleya Schilleriana, so named by the late Professor Reichenbach in honour of Consul Schiller, who was instrumental in introducing so many new Orchids, is a handsome plant producing many fusiform pseudobulbs from a creeping rhizome, each pseudobulb bearing two coriaceous dark green leaves which are oblong-lanceolate acute, from three to four inches long. The flowers are large and handsome, measuring as much as six inches across. The sepals and petals are yellowish, suffused with rose, and densely spotted and dotted with purple. The lip is large, the lateral lobes, which enclose the column, being white, veined and suffused with rosy purple the front lobe is ob-reniform, with crispulate edges, and of the richest amethyst-purple, veined with still deeper purple, while at the base is a patch of a golden yellow, veined with purple. *C. Schilleriana* is believed to be a natural hybrid between *C. Aclandiae* and *C. guttata*, both of which occur in Bahia, where *C. Schilleriana* is also supposed to have been collected. A comparison with the two species in question amply bears out this view, the front lobe of the lip, as well as the general habit of the plant, bearing a strong resemblance to that of *C. Aclandiae*, while all possible gradations of spotting in the sepals and petals have been observed, forming a graduated series connecting the two supposed parent species.

To succeed well with this plant it should be placed in a basket with good fibrous peat and living sphagnum, to which a few lumps of charcoal should be added, or if preferred it may be placed upon a block with a little sphagnum. It should be suspended near the glass, at the warmest end of the Cattleya-house, but it will require to be shaded from the direct rays of the sun. During the growing season it should, of course, have a copious supply of water at the roots; in winter, however, it will do with much less, although care must be taken not to let the plants shrivel, as this would cause irreparable injury.

FL 526

MARIA LINDENIA

LAELIA LINDLEYANA.

[Plate 526.]

Native of Brazil.

Epiphytal. *Pseudobulbs* many, from a creeping rhizome, slender, fusiform, about the size of a goose-quill, five or six inches high, diphyllous. *Leaves* linear-lanceolate acuminate, four to six inches in length, leathery, dark glaucous green, keeled at the back. *Scapes* produced from the top of the young pseudobulbs, two or more flowered. *Flowers* four to four and a half inches across; *sepals* and *petals* lanceolate-acute, white slightly suffused with pale purplish rose, the tips stained exteriorly with amethyst-purple; *lip* oblong, funnel-shaped, obscurely three-lobed, lateral lobes enclosing the column, front lobe reflexed, veined and stained with rosy purple, throat pale greenish yellow.

Cattleya Lindleyana, *H. G. Reichenbach fil.*, *Berliner Allgemeine Gartenzeitung*, 1857, p. 118. *Hooker*, *Botanical Magazine*, t. 5449. *Bateman*, *Second Century of Orchidaceous Plants*, t. 175.

Bletia Lindleyana, *H. G. Reichenbach fil.*, *Xenia Orchidacea*, ii., p. 112, t. 135.

Laelia Lindleyana, *Veitch's Manual of Orchidaceous Plants*, part ii., p. 73. *Williams*, *Orchid Grower's Manual*, 7th edition, p. 439.

One of the rarest of Laelias is undoubtedly *Laelia Lindleyana*, for it is but seldom met with in Orchid collections. It was first imported by Mr. Linden from Santa Catherina, in South Brazil, in 1857. Sir William Hooker, the then Director of the Royal Gardens, Kew, received it in 1863 from Bahia, through Mr. C. H. Williams; this provided the material for the figure in the *Botanical Magazine*, but Sir William Hooker erroneously attributed the name to Mr. Bateman, who, probably, was simply responsible for the identification of the plant.

Owing to the somewhat abnormal condition of the pollinia, the plant has been referred first to Cattleya, then to Bletia, and finally to Laelia, with which it has most affinity. Messrs. Veitch & Sons, in their *Manual of Orchidaceous Plants*, part ii., p. 74, suggest that it is probably of hybrid origin, in which *Cattleya intermedia* may have participated; if this view be correct, the plant would ultimately have to be referred to Laelio-Cattleya.

Laelia Lindleyana is an evergreen plant producing many slender fusiform pseudobulbs from a creeping rhizome, each bearing two linear-lanceolate acuminate leaves which are from four to six inches in length, leathery, dark glaucous green, and keeled at the back. The scapes are produced from the top of the young pseudobulbs, and are two or more flowered. The flowers measure from four to

four and a-half inches across, and are white slightly suffused with pale purplish rose, the tips stained exteriorly with amethyst-purple. The lip is obscurely three-lobed, oblong funnel-shaped, the mid-lobe reflexed, veined and stained at the apical portion with rosy purple; the throat is pale greenish yellow.

Laelia Lindleyana, to thrive well, should be placed in the cool part of the Cattleya-house. It should be potted in a compost of good fibrous peat, from which all the earthy particles have been shaken out, and chopped-up live sphagnum. A few lumps of charcoal added will be beneficial, as this prevents the compost becoming sour. Care must be taken above all things to place an ample supply of draining material at the bottom of the pot, for if this be neglected, the plants would stand but a poor chance of obtaining a hold. A liberal supply of water at the roots as well as occasional syringing overhead during the growing season is essential to their well-being. During the resting period the supply of water should be gradually diminished; at the same time, however, it must be borne in mind that the plant should never be allowed to become absolutely dry, as in that case the pseudobulbs would shrivel, and this would cause serious injury to the plant which it would take years to undo, and in some cases it would even prove fatal. Thrip and scale should also be carefully guarded against, for if these pests once get the upper hand they cause irreparable injury to the leaves. Steaming with tobacco-juice and the use of other fumigating apparatus will effectually keep them in check.

The plant from which our plate was drawn flowered in the collection of Sir Trevor Lawrence, Bart., at Burford Lodge, Dorking, the owner of so many choice and rare specimens.

527

CYMBIDIUM LOWIANUM VIRIDE.

CYMBIDIUM LOWIANUM VIRIDE.

[Plate 527.]

Native of Burmah.

Terrestrial. *Pseudobulbs* oblong, somewhat compressed, invested with the sheathing bases of the leaves. *Leaves* ligulate, acute, deep green, keeled on the under surface, from two to three feet in length. *Spike* many-flowered, drooping, from three to four feet in length. *Flowers* four inches across or more; *sepals* and *petals* lanceolate-oblong acute, yellowish green, veined with a deeper shade of green, keeled at the back; *lip* three-lobed, side lobes erect, not enclosing the column, pale yellowish green; front lobe sub-deltoid, undulated at the edges, the anterior part bright golden yellow margined with white, base white with a median streak of yellow from the anterior portion; *throat* white, the raised fleshy plates on the disk white slightly tinged with yellowish green. *Column* yellowish green, the anterior portion margined with yellow; *pollinia* white.

Cymbidium Lowianum, *H. G. Reichenbach fil.*, *Gardeners' Chronicle*, n.s., xi., 1879, p. 404, fig. 56. *Floral Magazine*, n.s., t. 353. *Veitch's Manual of Orchidaceous Plants*, Part ix., p. 19, with woodcut. *L'Orchidophile*, 1885, p. 145, with woodcut. *Reichenbachia*, 2nd series, ii., t. 53. *Warner, Select Orchidaceous Plants*, iii., t. 31. *Williams, Orchid Album*, x., t. 471. *Linden, Les Orchidées Exotiques*, p. 447, fig. 70. *Williams, Orchid Grower's Manual*, 7th edition, p. 222.

Cymbidium giganteum Lowianum, *H. G. Reichenbach fil.*, *Gardeners' Chronicle*, n.s., 1877, vii., p. 685. *Hooker, Flora of British India*, vi., p. 13.

Cymbidium Lowianum viride, *Hort. supra.*

Our present subject although a deservedly popular plant and a frequent denizen of our Orchid houses, has not hitherto produced many varieties, and any new form showing a marked departure from the type is therefore always welcome, and will be eagerly looked for by Orchid lovers. The few varietal forms recorded are *Cymbidium Lowianum concolor*, *C. Lowianum Mandaianum*, and *C. Lowianum superbissimum*. To these may now be added the subject of our illustration, *C. Lowianum viride*, which flowered in March, 1896, in the collection of A. H. Smee, Esq., The Grange, Carshalton, to whom we are indebted for the material from which our plate has been prepared.

Our present subject differs from the type in having the sepals and petals of a more decided and uniform green, while the lip is without a trace of crimson or maroon on the middle lobe, this being instead of a bright golden yellow; the flowers are also more crowded on the spikes than those of the original form.

As this plant is of strong growth, producing roots freely, it should be given ample accommodation; the pots should have a liberal quantity of draining material, next to which should be placed a layer of sphagnum; this will prevent the soil blocking up the drainage; some good brown fibrous peat, and double the quantity of light turfy loam with some sharp silver-sand will make a suitable compost. It is advisable to place the plant sufficiently below the rim of the pot so that it may receive a thorough soaking at the roots, as it requires much moisture during the growing season, at the roots as well as overhead. During the resting period, although the quantity of water given should be less, the plant should on no account be allowed to become dry, as this would materially injure it. An occasional sprinkling with the syringe when the weather is bright and warm will be advantageous, but during the dull months of winter it will be better to avoid this, and allow the plants to depend for moisture upon the water supplied to the roots occasionally; this will enable the spikes, which frequently begin to show as early as December, to come to full maturity. The temperature of the Cattleya house, and the atmosphere charged with moisture, will suit our plants admirably; when at rest, however, a temperature of 50° and less moisture will suffice.

Fig. 524

Fig. 523

CATTLEYA MOSSIAE MONDII.

[Plate 528.]

Native of La Guayra.

Epiphytal. *Pseudobulbs* oblong fusiform, ribbed, four inches or more in height, invested with the remains of greyish sheathing scales, monophyllous. *Leaves* leathery oblong, obtuse, keeled beneath, six to eight inches long. *Scape* terminal, three to five-flowered. *Flowers* very large, six inches or more in diameter; *sepals* oblong-lanceolate, acute, entire, spreading, recurved towards the apex, purplish rose; *petals* elliptic ovate, shortly clawed, the margins entire at the base, irregularly crispate towards the apex, of the same colour as the sepals; *lip* broadly obovate, incurved at the base where it folds over and encloses the column, the exterior surface of the part being of the same colour as the sepals and petals, the anterior expanded portion broadly obovate obtuse emarginate, crenulate and crispate at the margin, the ground colour of a delicate shade of yellow veined with rich orange-yellow, and shading off into white at the margins, while at the anterior half occurs a median streak of magenta-purple; the throat has the ground colour purplish rose, veined with rich magenta-purple. *Column* clavate, semi-terete, included.

Cattleya Mossiae, *Hooker, Botanical Magazine,* t. 3669. *Gardeners' Chronicle,* n.s., xx., 1883, page 530, fig. 89; *Id.*, xxvi., 1886, page 401, fig. 81. *Williams, Orchid Album,* vi., plate 246. *Hooker, First Century of Orchidaceous Plants,* plate 29. *Revue de l'Horticulture Belge,* 1893, page 200, with plate. *Linden, Les Orchidées Exotiques,* page 497, fig. 76. *Williams, Orchid Grower's Manual,* 7th edition, page 176, with woodcut.

Cattleya labiata Mossiae, *Lindley, Botanical Register,* 1840, plate 58. *Veitch's Manual of Orchidaceous Plants,* part ii, page 22, with plate.

Epidendrum labiatum Mossiae, *H. G. Reichenbach fil., Xenia Orchidacea,* ii., page 30. *Walper's Annales Botanices Systematicae,* vi, page 314.

Cattleya Mossiae Mondii, *Fraser, Gardening World,* xii., 1896, page 621.

Cattleya Mossiae is incontestably one of the most variable species of Cattleya, and one of the most prolific in distinct varietal forms. If we follow some authorities in regarding *C. Mossiae* itself only as a variety of *C. labiata,* the range of variation becomes still wider. Whatever view, however, botanists may ultimately take in this respect, for garden purposes it will be more convenient to consider the two series of forms as constituting two distinct species, and this attitude we have maintained throughout this work, as well as in the *Orchid Grower's Manual,* where no less than thirty-nine varieties of *C. Mossiae* are enumerated. Since the publication of the seventh edition of that work many more forms have been named and figured,

and scarcely a week passes during the flowering season of this plant without some new and distinct variety being exhibited. Several of the varieties of *C. Mossiae* have already been figured in this work, such as *C. M. aurea grandiflora*, vol. vii., plate 289; *C. M. decora*, vol. ix., plate 421; *C. M. Hardyana*, vol. iii., plate 125; and *C. M. Reineckiana*, vol. x., plate 461. The subject of our present plate forms a handsome addition to the ranks, and is equalled by few. It flowered in the collection of, and is deservedly dedicated to, Ludwig Mond, Esq., F.R.S., a munificent patron as well as a distinguished disciple of science, who is bringing together a fine collection of Orchids at the Poplars, Avenue Road, Regent's Park, under the able care and management of Mr. J. O. Clarke, to whose obliging courtesy we are indebted for the opportunity of illustrating this beautiful variety.

Cattleya Mossiae Mondii forms an evergreen tuft of fusiform ribbed pseudo-bulbs four inches or more in height, producing each a single leathery oblong obtuse leaf, six to eight inches long. The scape is terminal, and produces from three to five flowers, which are very beautiful, large and bold, measuring more than six inches across. The sepals and petals are of a beautiful shade of rosy purple, the former narrowly oblong, the latter very broad and flat with undulated margins. The lip is large, incurved at the base, where it folds over the column, and exteriorly of the same colour as the sepals and petals; the front lobe is of a pale yellow shade, veined with rich orange-yellow and shading off into white at the margins; at the anterior part occurs a median streak of magenta-purple, while in the throat the ground colour is pale rosy purple, veined with rich magenta-purple. It requires the same cultural treatment recommended by us in the case of the typical form, in the sixth volume of this work under plate 246.

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GOLDEN PLUME—This grand variety is of dwarf habit, has green leaves, and produces grand spikes of broad-petalled flowers of the richest golden yellow, indistinctly marked with small dots of crimson. This is undoubtedly one of the finest flowers yet raised. 3*s.* 6*d.*

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RUBY KING—This variety has a particularly dwarf habit of growth, and produces numerous spikes; the foliage is green. The flowers are numerous, and form a fine spike; petals broad, smooth, and of a rich ruby, the base of back of petals is yellow. This is extra fine, and is a very decided acquisition. 3*s.* 6*d.*

SCARLET PERFECTION—The foliage of this fine dwarf variety is deep glaucous green. The spikes are produced in profusion, and each truss is very large; the petals broad, smooth, round, and of the finest quality; they are of the richest scarlet, with a faint edge of gold, which intensifies the scarlet. A very desirable kind. 3*s.* 6*d.*

THE SHAHZADA—Medium height, fine green foliage. The trusses are large and numerous; the flowers of great substance, of rich orange-red; petals broad, dotted with crimson and margined irregularly with gold; sepals narrow, dotted with yellow and suffused with bright orange-scarlet; back of petals yellow, blotched with scarlet; fine. 7*s.* 6*d.*

NEW ITALIAN ORCHID-FLOWERED CANNAS.

ITALIA—Scarlet, very broadly edged with yellow, enormous flowers and foliage. We have flowered it here, and it bears out largely what is said of it in the Raiser's Catalogues, and in the *Gardeners' Chronicle*. It will be a fine indoor Canna, though we doubt its value out-of-doors in our climate; it is, however, quite worth placing in the first rank.

AUSTRIA—Fine massive foliage, enormous golden yellow flowers, heavily spotted. Has not yet flowered with us, but we have a fine stock.

The *Gardeners' Chronicle*, December 14th, says of *Italia*:—"Apart from the unusual size of the flowers and their beautiful golden vermilion colour, the plant has this peculiarity, that the general form of it is flattened, resembling an expanded Cattleya." Of *Austria*:—"This latter variety may be likened to a large Tulip or yellow Lily."

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